OLYMPUS
OM-4 T
REPAIR MANUAL

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EXPLANATION OF MARKS

(1) Indicates parts that are supplied both as a single piece and as an assembled unit. In the latter case, the single part is incorporated in the assembled unit indicated with the mark (1).
Exception: Parts in the mark ( ) are not supplied in single pieces.
(Parts that are supplied only in single pieces are not indicated with any mark. While parts that are supplied as an assembled unit are prefixed with "Z" or "U".)

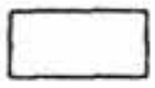
] Several types of parts for the same position are available, from which most suitable one is to be selected.

✻ 3 Parts differ according to different models and types. This mark is used to indicate various combinations in a picture.

Left-handed screw. The mate screw hole is not marked particularly.

Indicates parts that should not be touched directly by bare hand because special surface treatment is applied. Wear fingerstalls or use tweezers.

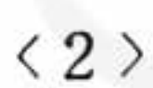
★ Not supplied as a repair part.



Used exclusively for black finish models.

——— Indicates original parts. New, modified ones are not indicated with this mark. Both original and modified parts are supplied.

No more available parts due to design change or out of stock.



A correction mark. Parts with this mark are not available.

〈 2 〉 Modified parts that are unable to show in the technical manual. The figure indicates reference page number.

2-A3 This notation is entered in the "Remarks" column of parts list and indicates parts position in the technical manual.

2-A3 → Parts position. The technical manual is divided into 16 equal sections. Each section can be identified by using A, B, C and D from left to right and 1, 2, 3 and 4 from top to bottom.

→ Indicates page number in which the technical manual appears. However, 1/1 (page 1 of 1) is not indicated particularly.

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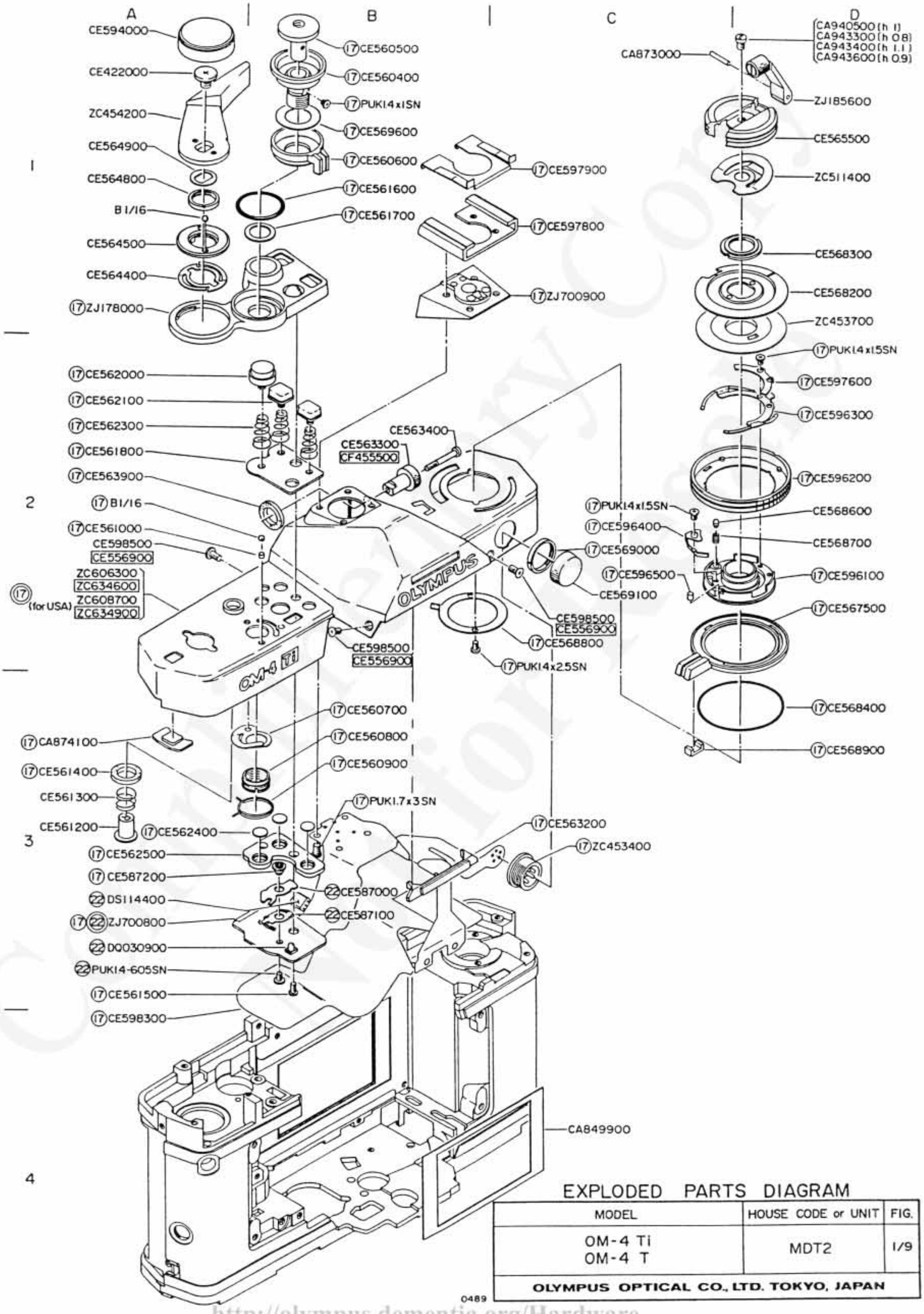

EXPLODED PARTS DIAGRAM

MODEL	HOUSE CODE or UNIT	FIG.
OM-4 Ti OM-4 T	MDT2	1/9
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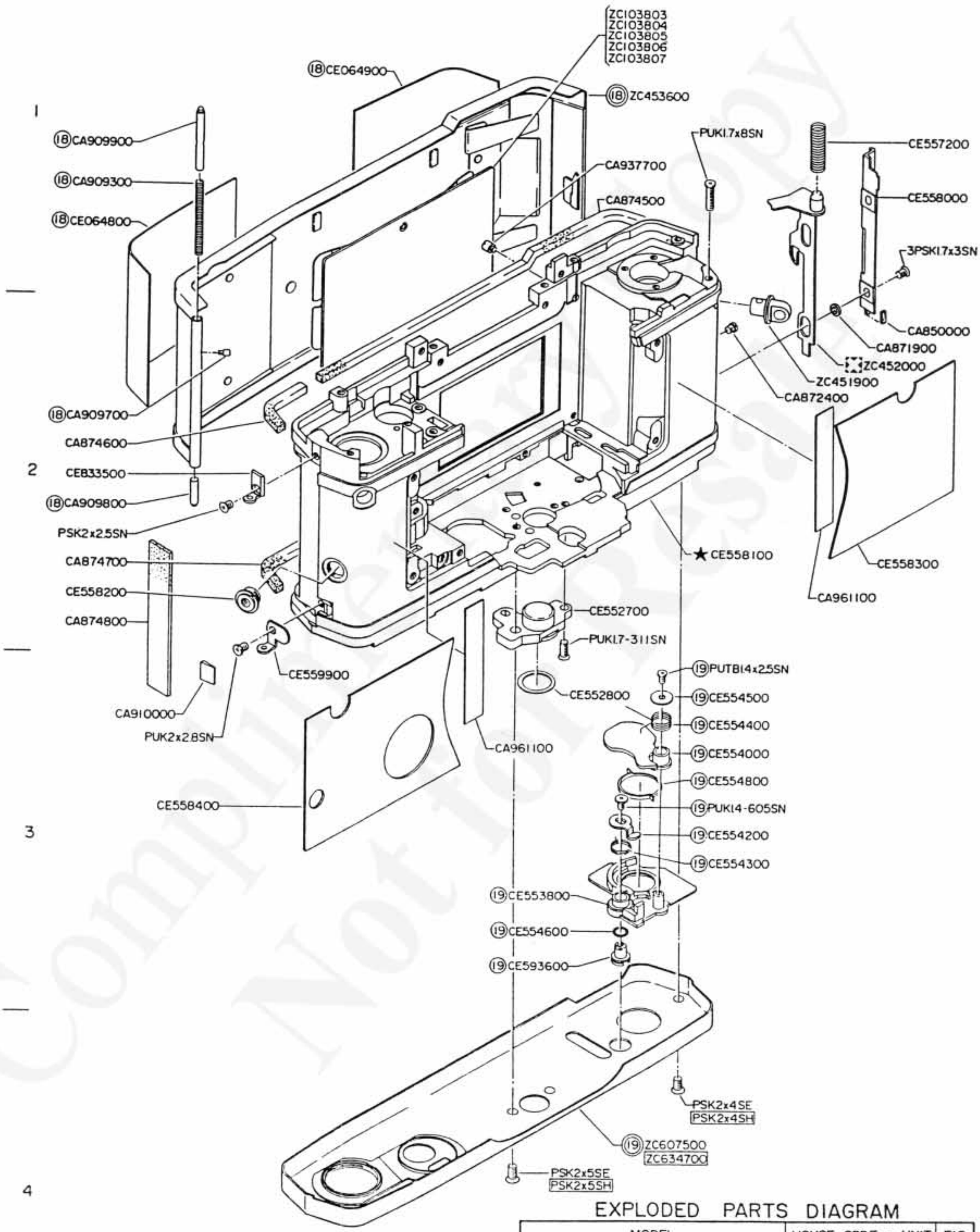
A B C D

1 2 3 4



EXPLODED PARTS DIAGRAM

MODEL	HOUSE CODE or UNIT	FIG.
OM-4 Ti OM-4 T	MDT2	2/9

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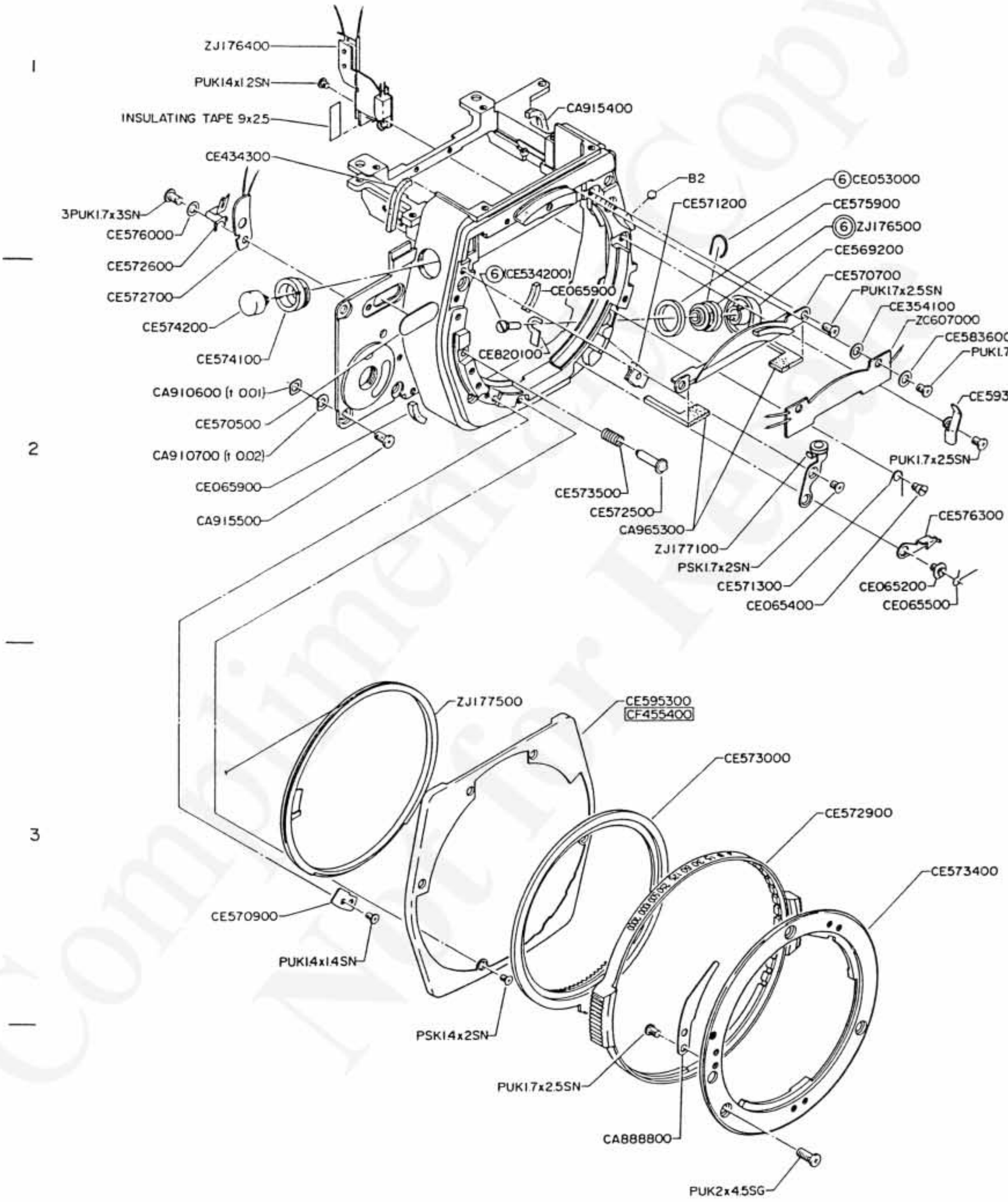
A B C D

1

2

3

4



EXPLODED PARTS DIAGRAM

MODEL	HOUSE CODE or UNIT	FIG.
OM-4 Ti OM-4 T	MDT2	3/9
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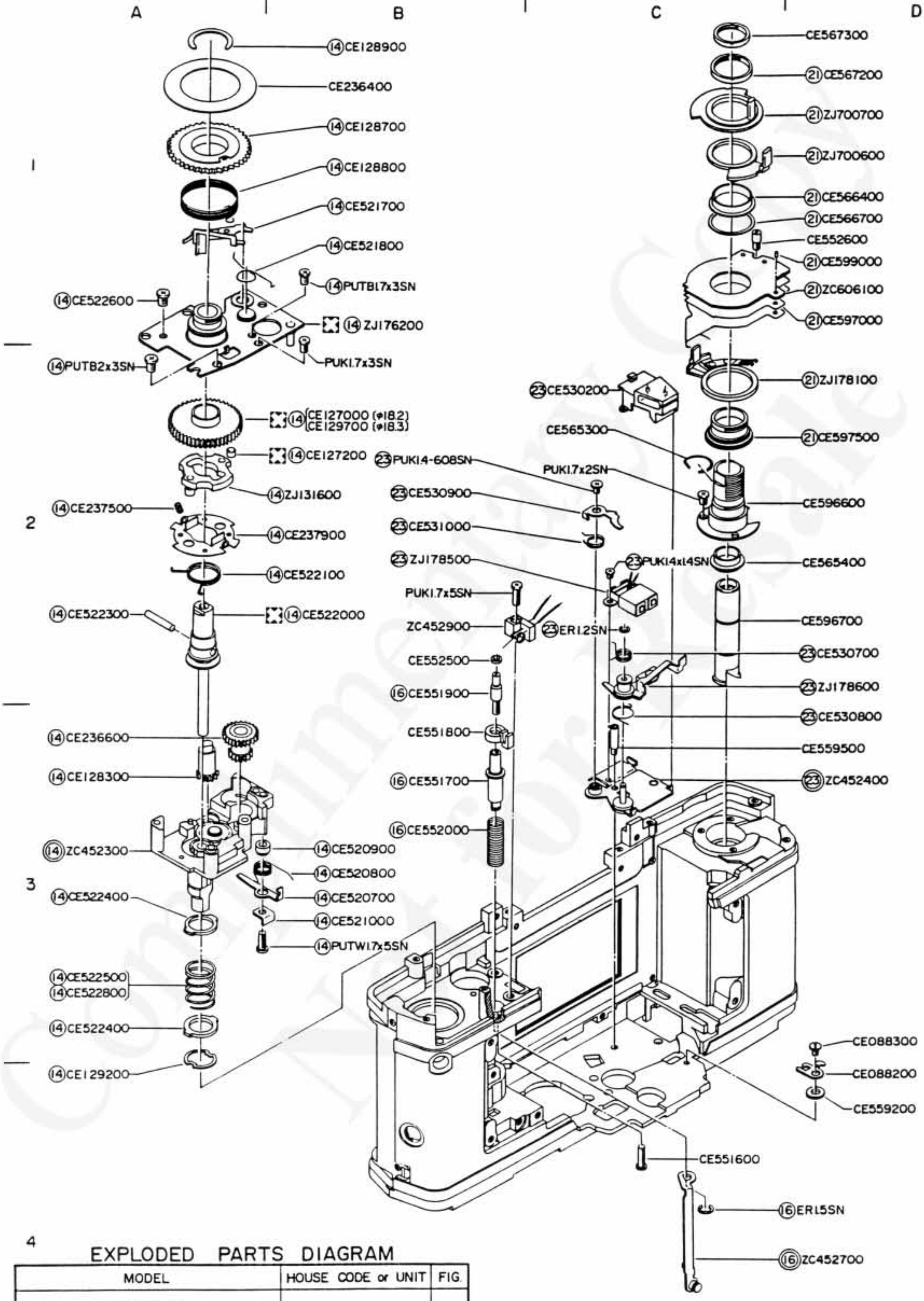

EXPLODED PARTS DIAGRAM

MODEL	HOUSE CODE or UNIT	FIG.
OM-4 Ti OM-4 T	MDT2	4/9
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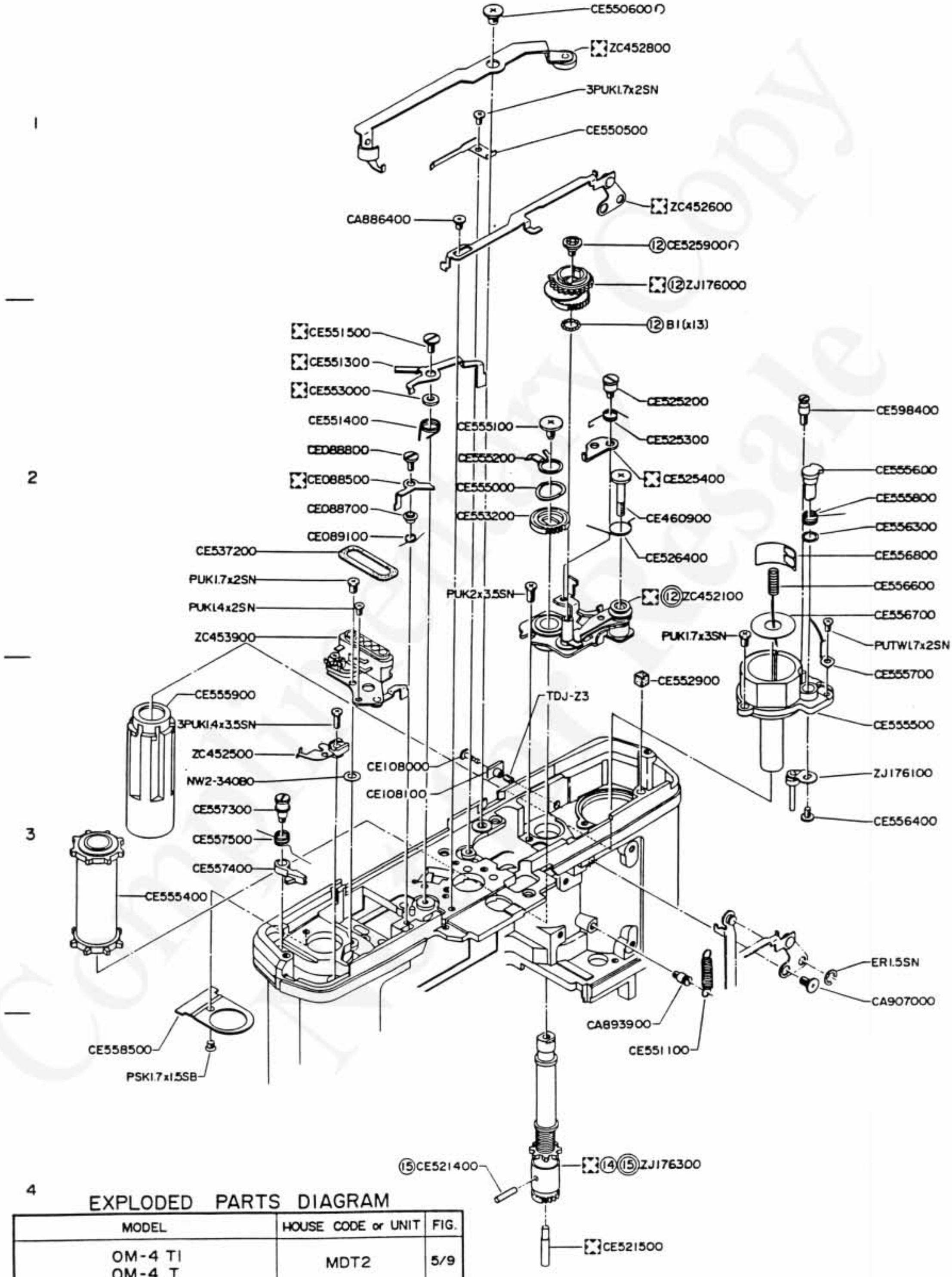
A B C D

1 2 3 4



EXPLODED PARTS DIAGRAM

MODEL	HOUSE CODE or UNIT	FIG.
OM-4 TI OM-4 T	MDT2	5/9
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MODEL	HOUSE CODE or UNIT	FIG.
OM-4 TI OM-4 T	MDT2	6/9
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EXPLODED PARTS DIAGRAM

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EXPLODED PARTS DIAGRAM

MODEL	HOUSE CODE or UNIT	FIG.
OM-4 Ti, OM-4 T	MDT2	7/9
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0990

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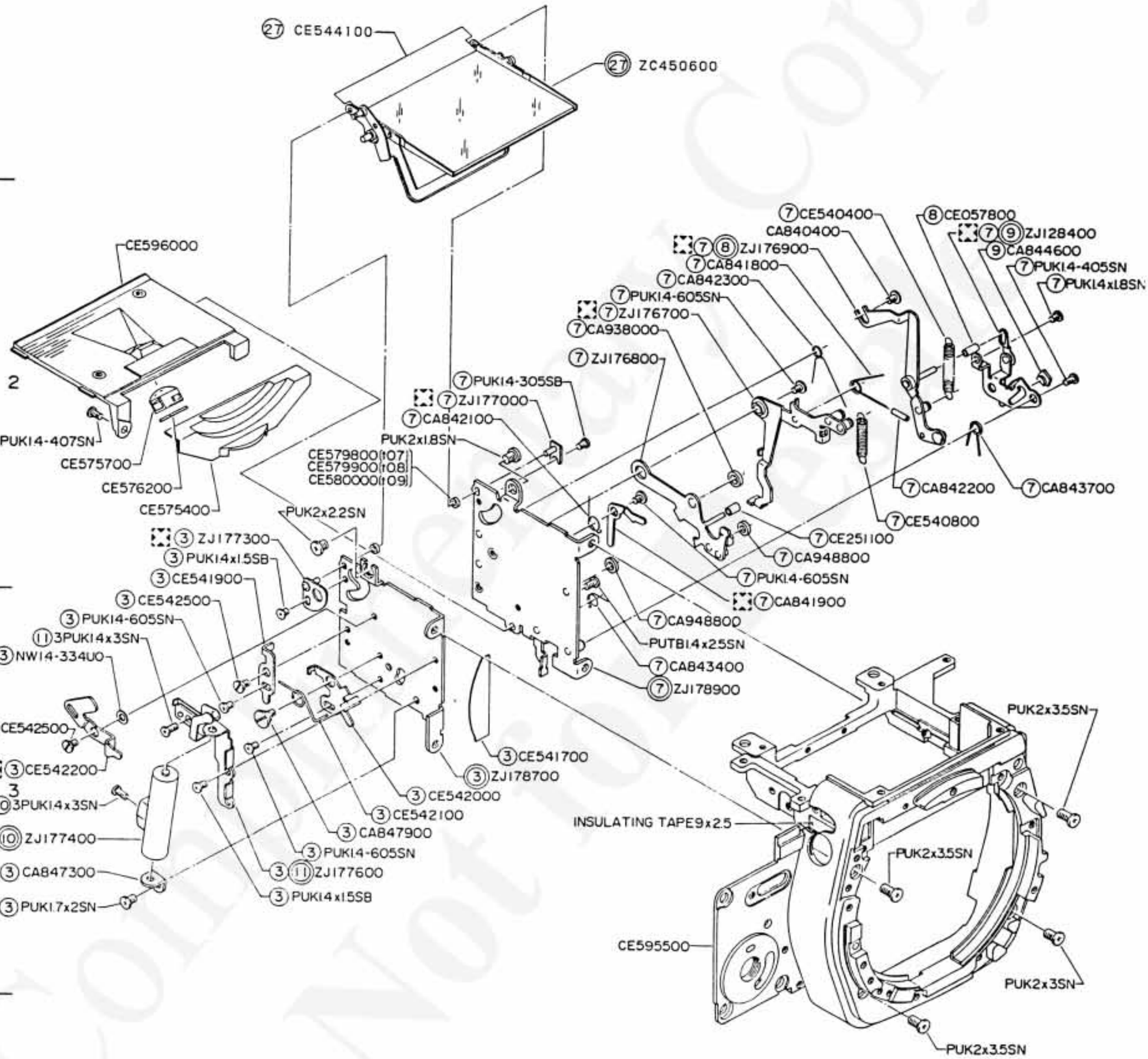

4

EXPLODED PARTS DIAGRAM

MODEL	HOUSE CODE or UNIT	FIG.
OM-4 Ti OM-4 T	MDT2	8/9
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0991

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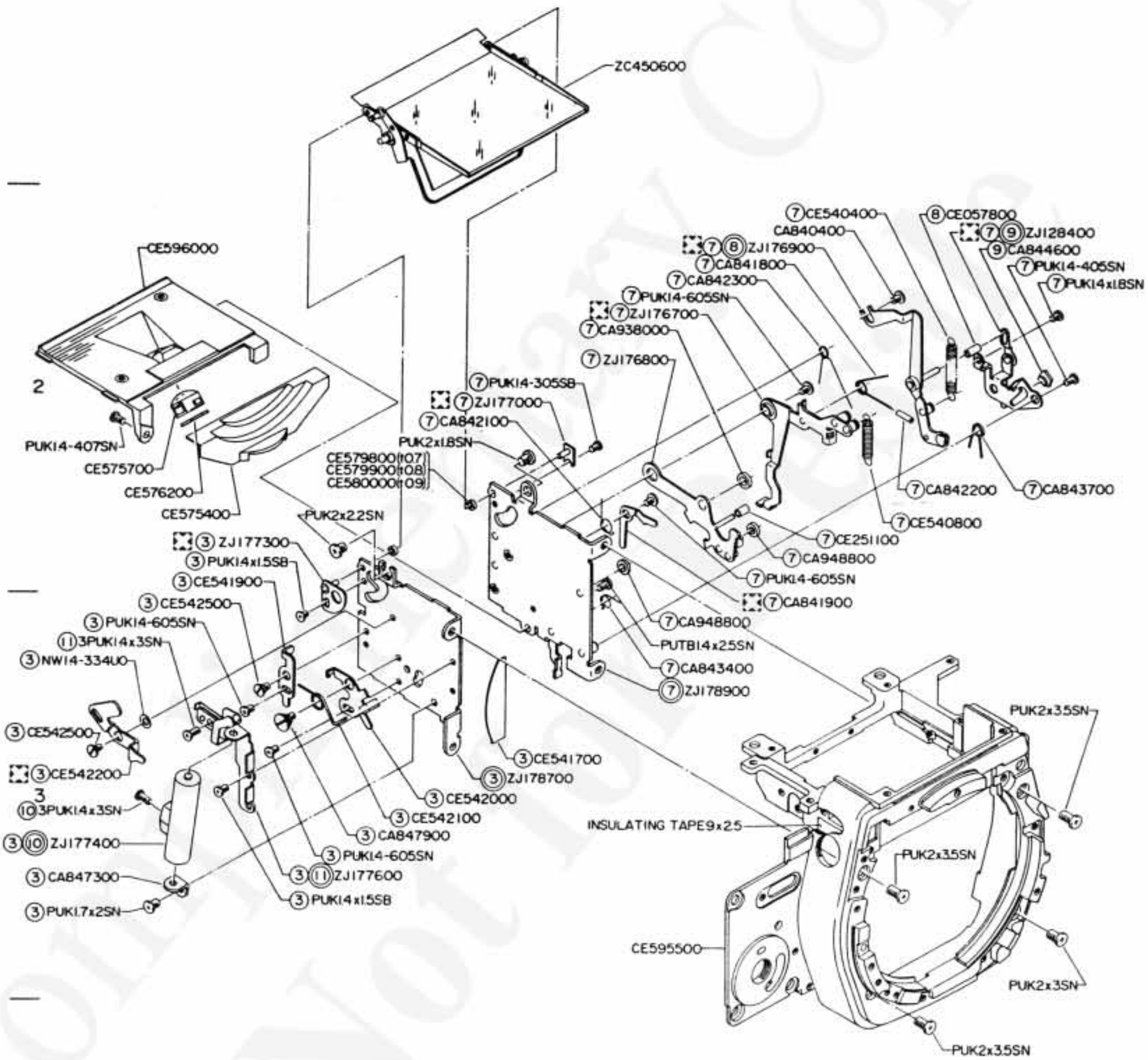

4

EXPLODED PARTS DIAGRAM

MODEL	HOUSE CODE or UNIT	FIG.
OM-4 Ti OM-4 T	MDT2	8/9
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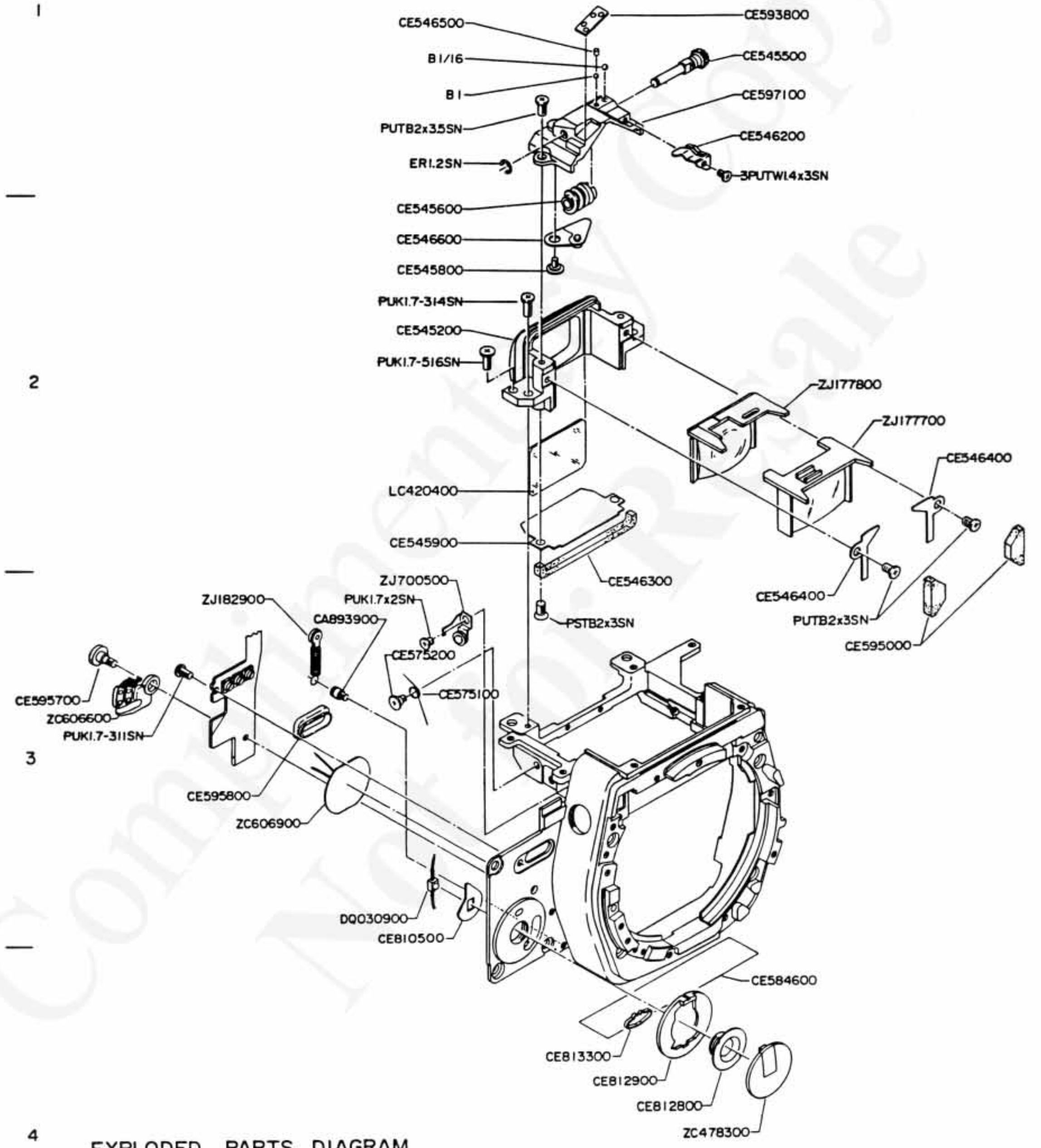
A | B | C | D

1

2

3

4



EXPLODED PARTS DIAGRAM

MODEL	HOUSE CODE or UNIT	FIG.
OM-4 Ti OM-4 T	MDT2	9/9
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変更通知表
(NOTICE OF MODIFICATION)

'91 −Oct. −1

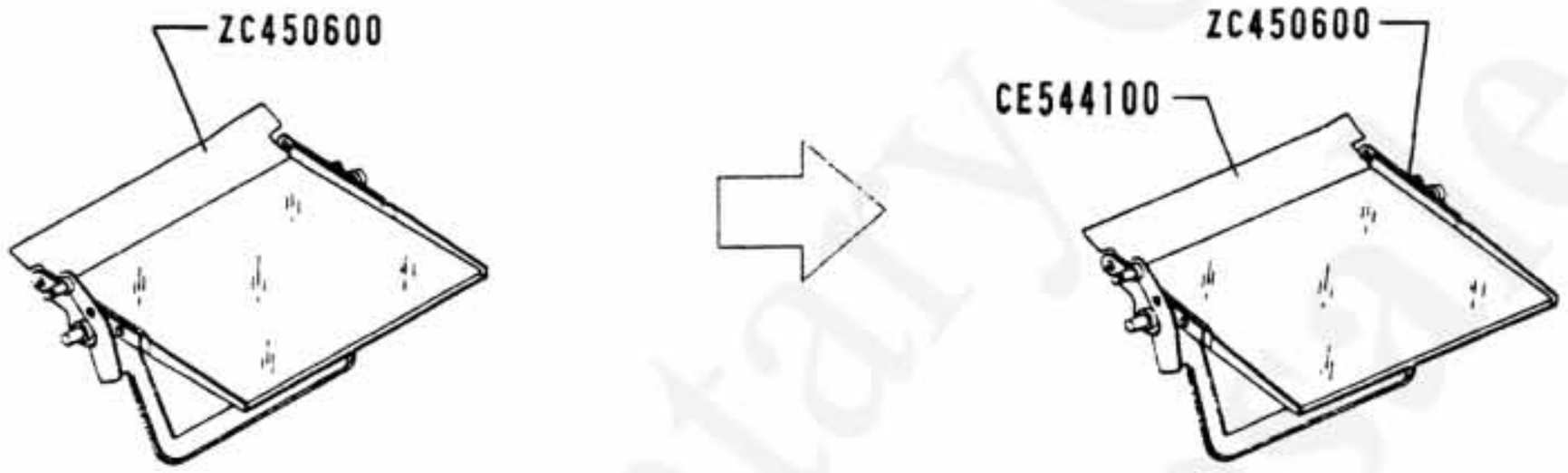
No. F − 4

機種 (MODEL)	OM−4Ti	件名 (SUBJECT)	シャコウフ (CE544100) の単部品化 Indivisual part available

変更 (DESCRIPTION)

・Mワク (ZC450600) の組部品だったシャコウフ (CE544100) を単品供給します。

・The light proof plate (CE544100) is available as a single part.



Mワク
mirror frame

理由 (REASON)

・Mワクのシャコウフだけが剝がれたり，破れているものが多いため。

・In most cases, only the light proof plate is damaged among the mirror frame defective.

備考 (REMARKS)

・発注の際はシャコウフ (CE544100) でお願いします。

・Light proof plate (CE544100) will be supplied upon receipt of order.

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MDT-2

PARTS No.	NAME OF PARTS	NOTE
CA840400	M LEVER SCREW	8-C2
CA841800	STOPPER SPRING	8-C2
CA841900	M HOOKING LEVER	8-C2
CA842100	HOOKING LEVER SPRING	8-B2
CA842200	TUBE 2	8-D2
CA842300	RETUURNING SPRING	8-C2
CA843400	HOOK SPRING	8-C3
CA843700	MS SPRING	8-D2
CA844600	M RING	8-D2
CA847300	PIPE HOLDER U	8-A3
CA847900	M STOPING SHAFT	8-B3
CA849900	B MASK	1-C4
CA850000	LIGHTPROOF PADDING	2-D2
CA871900	KEY PLATE COLLAR	2-D2
CA872400	STOPPER SCREW	2-D2
CA873000	R LEVER PIN	1-C1
CA874100	FILM COUNTER WINDOW	1-A3
CA874500	LIGHT PROOF L	2-C1
CA874600	LIGHT PROOF R	2-A2
CA874700	LIGHT PROOF B	2-A2
CA874800	LIGHT PROOF S	2-A2
CA884000	FW CAM	6-C3
CA884600	LEVER STOOPER	6-B3
CA885100	GEAR 3 SPRING	6-B3
CA885400	S RING	6-B3
CA885700	BASE PLATE SHAFT	6-B3
CA886400	KL SHAFT	5-B1
CA888800	B MOUNT SPRING	3-C4
CA891100	F SHAFT	7-A3
CA893900	B SPRING SHAFT	5-C4·9-B3
CA907000	C SCREW	5-D3
CA909300	PRESSING SPRING	2-A1
CA909700	HINGE PIN SCREW	2-A2
CA909800	HINGE PIN A	2-A2
CA909900	HINGE PIN B	2-A1
CA910000	COVERING PLATE	2-A3
CA910600	ADJ'WASHER	t=0.01 3-A2
CA910700	ADJ'WASHER	t=0.03 3-A2
CA915400	LIGHT PROOF U	3-C1
CA915500	FRONT SCREW	3-A2
CA937700	GUIDE	2-C1
CA938000	RUBBER RING	8-C2
CA940500	R LEVER ADJUSTER	h=1.0 1-D1
CA943300	R LEVER ADJUSTER 2	h=0.8 1-D1
CA943400	R LEVER ADJUSTER 3	h=1.1 1-D1
CA943600	R LEVER ADJUSTER 4	h=0.9 1-D1
CA948800	RUBBER RING 3	8-C2·C3
CA961100	TAPE	2-B3·D2
CA965300	DAMPER 2	3-C2
CA993200	S LEVER 2c WIDE HIGH	6-C3
CA993300	S LEVER 2d NARROW HIGH	6-C3
CA993900	S LEVER 1a MIDDLE	6-B3
CA994000	S LEVER 1b NARROW	6-B3
CA994100	S LEVER 1c WIDE	6-B3
CA994200	S LEVER 2a WIDE	6-C3
CA994300	S LEVER 2b NARROW	6-C3
CB158700	FOCUSING SCREEN	1-13 7-B3
CE053000	P STOPPER SPRING	3-D1
CE057800	SR TUBE	8-D2
CE064800	REAR LEATHER R	2-A1
CE064900	REAR LEATHER L	2-B1
CE065200	HOOKING SHAFT	3-D2
CE065400	B LEVER HOLDER	3-C2
CE065500	BL SPRING	3-D3
CE065900	LIGHT PROOF L	3-A2·B2
CE086200	B STOPPER RING	6-C1
CE088200	M RELEASE	4-D4
CE088300	MR SHAFT	4-D3
CE088500	TURN PLATE A	5-B2
CE088700	TURN COLLAR	5-B2
CE088800	TURN SCREW	5-B2
CE089100	TURN SPRING A	5-B2
CE108000	D CONTACT	5-B3
CE108100	D CASE	5-B3
CE127000	FW GEAR 1	φ=18.2 4-B2
CE127200	ROLLER	4-B2
CE128300	FC LOWER GEAR	4-A3
CE128700	FC UPPER GEAR	4-B1
CE128800	FC SPRING 2	4-B1
CE128900	FC STOPPER	5-B1
CE129200	SPOOL STOPPER	4-A4
CE129700	FW GEAR 2	φ=18.3 4-B2
CE236400	FILM COUNTER PLATE	4-B1
CE236600	IDLE 1	4-A3
CE237500	R SRPING A	4-A2

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PARTS LIST

MDT-2

PARTS No.	NAME OF PARTS	NOTE
CE237900	SPRING 3	4-B2
CE251100	MS TUBE	8-C2
CE354100	FC NW 10	3-D2
CE422000	FW LEVER SCREW	1-A1
CE434300	LITHT PROOF L	3-A1
CE460900	M HOLDING SCREW	5-C2
CE470300	S GUIDE	6-B4
CE493900	T STOPPER	6-C1
CE496600	ADJUSTOR	6-A2
CE500500	CLAW A	6-B3
CE500700	F SPRING A	6-B3
CE500800	GEAR SCREW	6-C1
CE502100	TR TUBE	6-C2
CE502600	RESET LEVER	6-C2
CE502800	RESET SPRING	6-C2
CE502900	X CONTACT 1	6-C2
CE503300	MG BASE PLATE	6-D3
CE503700	B SPRING	6-D3
CE503800	M LEVER 2	6-C2
CE504400	M LEVER SPRING	6-C2
CE504600	HOLDING PLATE	6-C2
CE505000	R SPRING 2	6-C2
CE506300	ROLLER D	6-A1
CE507100	T NUT	6-C1
CE507200	TN SHAFT	6-C1
CE507300	TN LOCK	6-C1
CE508000	S PLATE	6-C4
CE508300	B STOPPER	6-C1
CE508400	U STOPPER	6-B1
CE508800	RESET SCREW	6-C2
CE509300	B SHAFT 2	6-C3
CE509900	B LEVER SPRING 2	6-B2
CE519300	WASHER	6-A1·B2
CE520700	LOCK LEVER	4-B3
CE520800	LOCK SPRING	4-B3
CE520900	LOCK SHAFT	4-B3
CE521000	CONNECTING PLATE	4-B3
CE521400	P PIN	5-B4
CE521500	P ROD	5-C4
CE521700	P-FC PLATE	4-B1
CE521800	P-FC SPRING	4-B1
CE522000	P-FW SHAFT	4-B2
CE522100	RETURNING SPRING	4-B2
CE522300	P-W PIN	4-A2
CE522400	SPOOL PLATE	4-A3
CE522500	SPOOL SPRING	STRONG 4-A3
CE522600	W SCREW	4-A1
CE522800	SPOOL SPRING	WEAK 4-A3
CE525200	MK SHAFT	5-C2
CE525300	MK SPRING	5-C2
CE525400	M RELEASE	5-C2
CE525900	ME GUIDE	5-C1
CE526400	LOCK SPRING	5-C2
CE530200	M MAIN BODY	4-C2
CE530700	MG SPRING	4-D2
CE530800	AM SPRING	4-D3
CE530900	SL LEVER	4-B2
CE531000	SL SPRING	4-B2
CE537200	SW PACKING	5-A2
CE540400	M SPRING	8-C2
CE540800	D SPRING	8-D2
CE541700	R COVER	8-B3
CE541900	P LEVER	8-A2
CE542000	P PLATE	8-B3
CE542100	P SPRING	8-B3
CE542200	H LEVER	8-A3
CE542500	H-P SHAFT	8-A3
CE544100	LIGHT PROOF PLATE	8-B1
CE545200	F LOWER FRAME	9-B2
CE545500	F SHAFT	9-C1
CE545600	F CAM	9-B2
CE545800	F LEVER SCREW	9-B2
CE545900	F COVER	9-B2
CE546200	F CLICK	9-C1
CE546300	LIGHT PROOF F	9-C3
CE546400	F COVER PLATE	9-D2·D3
CE546500	F ROLLER	9-B1
CE546600	F LEVER M	9-B2
CE547100	FR HOLDER	7-D2
CE547300	PR PLATE	7-D2
CE547400	RUBBER CONNECTOR	7-D1
CE547500	L STOPPER L	7-D1
CE547600	L STOPPER R	7-D1
CE547900	COVERING PLATE	7-D1
CE548100	P LIGHT PROOF	7-D2
CE548200	PL LIGHT PROOF	7-D2

UPDATED: 差し替えてください
Date '91. SEP. 30

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PARTS LIST

MDT-2

PARTS No.	NAME OF PARTS	NOTE
CE237900	SPRING 3	4-B2
CE251100	MS TUBE	8-C2
CE354100	FC NW 10	3-D2
CE422000	FW LEVER SCREW	1-A1
CE434300	LITHT PROOF L	3-A1
CE460900	M HOLDING SCREW	5-C2
CE470300	S GUIDE	6-B4
CE493900	T STOPPER	6-C1
CE496600	ADJUSTOR	6-A2
CE500500	CLAW A	6-B3
CE500700	F SPRING A	6-B3
CE500800	GEAR SCREW	6-C1
CE502100	TR TUBE	6-C2
CE502600	RESET LEVER	6-C2
CE502800	RESET SPRING	6-C2
CE502900	X CONTACT 1	6-C2
CE503300	MG BASE PLATE	6-D3
CE503700	B SPRING	6-D3
CE503800	M LEVER 2	6-C2
CE504400	M LEVER SPRING	6-C2
CE504600	HOLDING PLATE	6-C2
CE505000	R SPRING 2	6-C2
CE506300	ROLLER D	6-A1
CE507100	T NUT	6-C1
CE507200	TN SHAFT	6-C1
CE507300	TN LOCK	6-C1
CE508000	S PLATE	6-C4
CE508300	B STOPPER	6-C1
CE508400	U STOPPER	6-B1
CE508800	RESET SCREW	6-C2
CE509300	B SHAFT 2	6-C3
CE509900	B LEVER SPRING 2	6-B2
CE519300	WASHER	6-A1·B2
CE520700	LOCK LEVER	4-B3
CE520800	LOCK SPRING	4-B3
CE520900	LOCK SHAFT	4-B3
CE521000	CONNECTING PLATE	4-B3
CE521400	P PIN	5-B4
CE521500	P ROD	5-C4
CE521700	P-FC PLATE	4-B1
CE521800	P-FC SPRING	4-B1
CE522000	P-FW SHAFT	4-B2
CE522100	RETURNING SPRING	4-B2
CE522300	P-W PIN	4-A2
CE522400	SPOOL PLATE	4-A3
CE522500	SPOOL SPRING	STRONG 4-A3
CE522600	W SCREW	4-A1
CE522800	SPOOL SPRING	WEAK 4-A3
CE525200	MK SHAFT	5-C2
CE525300	MK SPRING	5-C2
CE525400	M RELEASE	5-C2
CE525900	ME GUIDE	5-C1
CE526400	LOCK SPRING	5-C2
CE530200	M MAIN BODY	4-C2
CE530700	MG SPRING	4-D2
CE530800	AM SPRING	4-D3
CE530900	SL LEVER	4-B2
CE531000	SL SPRING	4-B2
CE537200	SW PACKING	5-A2
CE540400	M SPRING	8-C2
CE540800	D SPRING	8-D2
CE541700	R COVER	8-B3
CE541900	P LEVER	8-A2
CE542000	P PLATE	8-B3
CE542100	P SPRING	8-B3
CE542200	H LEVER	8-A3
CE542500	H-P SHAFT	8-A3
CE545200	F LOWER FRAME	9-B2
CE545500	F SHAFT	9-C1
CE545600	F CAM	9-B2
CE545800	F LEVER SCREW	9-B2
CE545900	F COVER	9-B2
CE546200	F CLICK	9-C1
CE546300	LIGHT PROOF F	9-C3
CE546400	F COVER PLATE	9-D2·D3
CE546500	F ROLLER	9-B1
CE546600	F LEVER M	9-B2
CE547100	FR HOLDER	7-D2
CE547300	PR PLATE	7-D2
CE547400	RUBBER CONNECTOR	7-D1
CE547500	L STOPPER L	7-D1
CE547600	L STOPPER R	7-D1
CE547900	COVERING PLATE	7-D1
CE548100	P LIGHT PROOF	7-D2
CE548200	PL LIGHT PROOF	7-D2

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PARTS LIST MDT-2

PARTS No.	NAME OF PARTS	NOTE	PARTS No.	NAME OF PARTS	NOTE
CE550500	KM SPRING	5-C1	CE558100	DIE-CUST BODY	2-C2
CE550600	M LEVER SHAFT 2	5-C1	CE558200	HOLDING SCREW Y	2-A2
CE551100	RELEASE SPRING	5-C4	CE558300	FRONT LEATHER L	2-D2
CE551300	K PLATE B	5-B2	CE558400	FRONT LEATHER R	2-A3
CE551400	K SPRING B2	5-B2	CE558500	P PLATE	5-A2
CE551500	K SHAFT 3	5-B2	CE558900	SPRING S HAFT 2	6-C3
CE551600	R SCREW	4-C4	CE559200	MR WASHER	4-D4
CE551700	CONNECTOR	4-B3	CE559500	M SCREW	4-D3
CE551800	BUTTON HOLDER	4-B3	CE559700	ML SHAFT	7-B1
CE551900	BUTTON SHAFT	4-B2	CE559900	L PIN HOLDER Y	2-B3
CE552000	BUTTON SPRING	4-B3			
CE552500	BUTTON COLLAR	4-B2	CE560400	BUTTON WASHER	1-B1
CE552600	SV SCREW	4-D1	CE560500	BUTTON	1-B1
CE552700	TRIPOD MOUNT PLATE	2-C2	CE560600	CM LEVER	1-B1
CE552800	T MOUNT SEAL	2-C3	CE560700	CM SPRING PLATE	1-B3
CE552900	CUIDE COVER	5-C3	CE560800	W NUT	1-B3
CE553000	K LEVER COLLAR	5-B2	CE560900	CM SPRING	1-B3
CE553200	1 GEAR	5-B2	CE561000	CM ROLLER	1-A2
CE553800	B FRAME	2-C3	CE561200	RK BUTTON	1-A3
CE554000	M COVER	2-C3	CE561300	RK SPRING	1-A3
CE554200	OC LEVER	2-C3	CE561400	RK SEAL	1-A3
CE554300	OC SPRING	2-C3	CE561500	CB SCREW	1-A3
CE554400	M SPRING	2-C3	CE561600	CM SEAL	1-B1
CE554500	H WASHER	2-C3	CE561700	CM WASHER	1-B1
CE554600	O RING 28	2-C3	CE561800	SB SEAL	1-A2
CE554800	RUBBER RING	2-C3	CE562000	S BUTTON PIN	1-A2
CE555000	GEAR #1 SPRING	5-B2	CE562100	SHIFT BUTTON	1-A2
CE555100	GEAR #1 SCREW	5-B2	CE562300	SB SPRING	1-A2
CE555200	K CLAW	5-B2	CE562400	SB RUBBER DISK	1-A3
CE555400	SPROCKET	5-A3	CE562500	BUTTON BASE	1-A3
CE555500	SF CASE	5-D3	CE563200	PL COVER	1-C3
CE555600	SF SHAFT	5-D2	CE563300	IS KNOB	1-B2
CE555700	SF PLATE	5-D3	CE563400	IS SCREW	1-B2
CE555800	SF SPRING	5-D2	CE563900	IS SEAL	1-A2
CE555900	AF SPOOL	5-A3	CE564400	FW LEVER SPRING	1-A1
CE556300	SF WASHER	5-D2	CE564500	SPRING HOLDER	1-A1
CE556400	SF STOPPER SCREW	5-D3	CE564800	LEVER NUT	1-A1
CE556600	MINUS CONTACT	5-D2	CE564900	LEVER CONNECTOR	1-A2
CE556700	CELL SEAL 1	5-D2	CE565300	R SPRING	4-C2
CE556800	CELL SEAL 2	5-D2	CE565400	R SHAFT HOLDER	4-D2
CE557200	KEY SPRING	2-D1	CE565500	R KNOB	1-D1
CE557300	K SHAFT	5-A3	CE566400	SV COLLAR WASHER	4-D1
CE557400	C LEVER	5-A3	CE566700	CB WASHER	4-D1
CE557500	K SPRING	5-A3	CE567200	SV NUT 1	4-D1
CE558000	KEY COVER Y	2-D1	CE567300	SV NUT 2	4-D1

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PARTS LIST MDT-2

PARTS No.	NAME OF PARTS	NOTE
CE567500	MODE LEVER	1-D2
CE568200	ASA COVERING PLATE	1-D1
CE568300	COVER HOLDER	1-D1
CE568400	MODE SEAL	1-D3
CE568600	SV CLICK	1-D2
CE568700	SV SPRING	1-D2
CE568800	MODE PLATE	1-C2
CE568900	MODE CLICK STOPPER	1-D3
CE569000	5P NUT	1-C2
CE569100	5P CAP	1-C2
CE569200	CP CAP	3-D1
CE569600	BUTTON WASHER	1-B1
CE570300	P FRAME	7-B2
CE570400	MASK	7-B2
CE570500	FC COVER	3-A2
CE570700	COVERING PLATE	3-D1
CE570900	L STOPPER	3-A3
CE571200	BL BUTTON	3-C1
CE571300	HOOK SPRING	3-C2
CE572500	L PIN	3-C2
CE572600	L CONTACT	3-A2
CE572700	L CIRCUIT BOARD	3-A2
CE572900	S DIAL	3-D3
CE573000	DIAL GEAR	3-C3
CE573100	F LOCK PLATE	7-C3
CE573300	F HINGE	7-B3
CE573400	B MOUNT RING	3-D3
CE573500	L PIN SCREW	3-C2
CE574100	LS FRAME	3-A2
CE574200	LS BUTTON	3-A2
CE574300	F SPRING	7-B3
CE574400	F FRAME	7-A3
CE575000	P HOLDER	7-C1
CE575100	A SPRING	9-B3
CE575200	H SPRING SHAFT	9-B3
CE575400	LOWER COVER	8-A2
CE575500	L PLATE	7-A4
CE575600	L STOPPER	7-B4
CE575700	M LENS	8-A2
CE575800	P COVER	7-B1
CE575900	SOCKET RING	3-D1
CE576000	L INSULATOR	3-A1
CE576200	FILTER	8-A2
CE576300	BL LEVER	3-D2

PARTS No.	NAME OF PARTS		NOTE
CE576500	SHIM 3	t=0.03	7-C3
CE576600	SHIM 4	t=0.04	7-C3
CE576700	SHIM 5	t=0.05	7-C3
CE576800	SHIM 6	t=0.06	7-C3
CE576900	SHIM 7	t=0.07	7-C3
CE577000	SHIM 8	t=0.08	7-C3
CE577100	SHIM 9	t=0.09	7-C3
CE577200	SHIM 10	t=0.10	7-C3
CE577300	SHIM 11	t=0.11	7-C3
CE577400	SHIM 12	t=0.12	7-C3
CE577500	SHIM 13	t=0.13	7-C3
CE577600	SHIM 14	t=0.14	7-C3
CE577700	SHIM 15	t=0.15	7-C3
CE577800	SHIM 16	t=0.16	7-C3
CE577900	SHIM 17	t=0.17	7-C3
CE578000	SHIM 18	t=0.18	7-C3
CE578100	SHIM 19	t=0.19	7-C3
CE578200	SHIM 20	t=0.20	7-C3
CE578300	SHIM 21	t=0.21	7-C3
CE578400	SHIM 22	t=0.22	7-C3
CE578500	SHIM 23	t=0.23	7-C3
CE578600	SHIM 24	t=0.24	7-C3
CE578700	SHIM 25	t=0.25	7-C3
CE578800	SHIM 26	t=0.26	7-C3
CE578900	SHIM 27	t=0.27	7-C3
CE579000	SHIM 28	t=0.28	7-C3
CE579100	SHIM 29	t=0.29	7-C3
CE579200	SHIM 30	t=0.30	7-C3
CE579300	SHIM 31	t=0.31	7-C3
CE579400	SHIM 32	t=0.32	7-C3
CE579500	SHIM 33	t=0.33	7-C3
CE579600	SHIM 34	t=0.34	7-C3
CE579700	SHIM 35	t=0.35	7-C3
CE579800	WASHER 7	t=0.70	8-B2
CE579900	WASHER 8	t=0.80	8-B2
CE580000	WASHER 9	t=0.90	8-B2
CE580100	SHIM	t=0.03	7-B3
CE580200	SHIM	t=0.04	7-B3
CE580300	SHIM	t=0.05	7-B3
CE580400	SHIM	t=0.06	7-B3
CE580500	SHIM	t=0.07	7-B3
CE580600	SHIM	t=0.08	7-B3
CE580700	SHIM	t=0.09	7-B3
CE580800	SHIM	t=0.10	7-B3

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PARTS LIST MDT-2

PARTS No.	NAME OF PARTS		NOTE
CE580900	SHIM	t=0.11	7-B3
CE581000	SHIM	t=0.12	7-B3
CE581100	SHIM	t=0.13	7-B3
CE581200	SHIM	t=0.14	7-B3
CE581300	SHIM	t=0.15	7-B3
CE581400	SHIM	t=0.16	7-B3
CE581500	SHIM	t=0.17	7-B3
CE581600	SHIM	t=0.18	7-B3
CE581700	SHIM	t=0.19	7-B3
CE581800	SHIM	t=0.20	7-B3
CE581900	SHIM	t=0.21	7-B3
CE582000	SHIM	t=0.22	7-B3
CE582100	SHIM	t=0.23	7-B3
CE582200	SHIM	t=0.24	7-B3
CE582300	SHIM	t=0.25	7-B3
CE582400	SHIM	t=0.26	7-B3
CE582500	SHIM	t=0.27	7-B3
CE582600	SHIM	t=0.28	7-B3
CE582700	SHIM	t=0.29	7-B3
CE582800	SHIM	t=0.30	7-B3
CE582900	SHIM	t=0.31	7-B3
CE583000	SHIM	t=0.32	7-B3
CE583100	SHIM	t=0.33	7-B3
CE583200	SHIM	t=0.34	7-B3
CE583300	SHIM	t=0.35	7-B3
CE583600	AV WASHER		3-D2
CE584200	PL TAPE		7-D2
CE584600	F TAPE		9-C4
CE587000	CM PLATE		1-B3
CE587100	CM CONTACT		1-B3
CE587200	CM SHAFT		1-A3
CE593300	C SPRING 2		3-D2
CE593600	H SHAFT		2-C3
CE593800	FP SPLICER		9-C1
CE594000	LEVER CAP		1-A1
CE594900	F LIGHT PROOF T		7-C1
CE595000	F LIGHT PROOF S		9-D3
CE595300	FRONT COVER T		3-C3
CE595400	F COVERING PLATE T		7-C3
CE595500	FRONT CASTING		8-C3
CE595700	SE SCREW 2		9-A3
CE595800	VR COVER		9-A3
CE596000	L COVER PLATE		8-A2
CE596100	MODE SHAFT		1-D2
CE596200	CV DIAL		1-D2
CE596300	CV HOLDER		1-D2
CE596400	CV CLICK		1-C2
CE596500	CV ROLLER		1-C2
CE596600	R SHAFT HOLDER		4-D2
CE596700	R SHAFT		4-D2
CE597000	SV TAPE		4-D1
CE597100	F UPPER FRAME		9-C1
CE597200	C RUBBER		7-B1
CE597300	C HOLDER		7-B1
CE597400	C SCREW		7-B1
CE597500	SV COLLAR 4		4-D2
CE597600	CV HOLDER 2		1-D2
CE597800	ACC'SHOE		1-C1
CE597900	ACC'SHOE SPRING T		1-C1
CE598300	U INSULATOR		1-A4
CE598400	SF SCREW 2		5-D2
CE598500	U SCREW T		1-A2·B2· C2
CE598700	L STOPPER SCREW		7-D1
CE598800	LCD TAPE 2		7-D1
CE599000	SV JUMPER		4-D1
CE599700	RIBBON WIRE 55		6-C4
CE599800	RIBBON WIRE 56		6-C4
			3·D2
CE810500	S INSULATOR 2		9-B3
CE812800	SE STOPPER		9-C4
CE812900	SE LEVER		9-C4
CE813300	SE SPRING		9-C4
CE820100	FP CONTACT 2		3-B2
CE833500	L PLATE U		2-A2
CE853300	MG CONTACT		6-D2
CE853400	COVER		6-C1
CE853500	L STOPPER 5		6-B3
LC420400	COVER GLASS		9-B2
LC420500	HF PRISM		7-D2

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PARTS LIST MDT-2

PARTS No.	NAME OF PARTS	NOTE
ZC103803	PRESSURE PLATE No. 3	2-C1
ZC103804	PRESSURE PLATE No. 4	2-C1
ZC103805	PRESSURE PLATE No. 5	2-C1
ZC103806	PRESSURE PLATE No. 6	2-C1
ZC103807	PRESSURE PLATE No. 7	2-C1
ZC450600	M FRAME ASS'Y	8-C1
ZC451000	SHUTTER CURTAIN FRAME	6-B1
ZC451200	PENTA PRISM ASS'Y	7-B2
ZC451300	R LENS ASS'Y	7-D2
ZC451900	STRAP RING ASS'Y	2-D2
ZC452000	LOCK PLATE ASS'Y	2-D2
ZC452100	LOWER RASE PLATE ASS'Y	5-C2
ZC452300	FW MECH ASS'Y	4-A3
ZC452400	M BASE PLATE ASS'Y	4-D3
ZC452500	SW PLATE ASS'Y	5-A3
ZC452600	KL PLATE ASS'Y	5-C1
ZC452700	RELEASE PLATE ASS'Y	4-D4
ZC452800	KM LEVER ASS'Y	5-C1
ZC452900	D SWITCH ASS'Y	4-B2
ZC453100	TV GEAR ASS'Y	6-D2
ZC453400	5P SOCKET ASS'Y	1-C3
ZC453600	REAR COVER ASS'Y	2-C1
ZC453700	SV DIAL ASS'Y	1-D1
ZC453900	SW PLATE ASS'Y	5-A2
ZC454200	FW LEVER ASS'Y	1-A1
ZC478300	SE HOLDER ASS'Y	9-C4
ZC480000	TR BASE ASS'Y	6-D1
ZC481200	B CAP ASS'Y	2-B4
ZC485200	K PRISM ASS'Y	7-D1
ZC485800	X CONTACT BASE ASS'Y	6-C3
ZC490500	1 ST. SHUTTER CURTAIN	6-A2
ZC490800	TUBE A ASS'Y	6-A2
ZC491000	2ND. SHUTTER CURTAIN	6-A2
ZC495900	B LEVER ASS'Y	6-B2
ZC505500	GEAR A ASS'Y	6-B2
ZC511400	R LEVER SPRING ASS'Y	1-D1
ZC606100	SV6 CIRCUIT BOARD	4-D1
ZC606200	TV CIRCUIT BOARD	6-D1
ZC606300	TOP COVER ASS'Y	1-A2
ZC606600	SE HOLDER ASS'Y	9-A3
ZC606900	PCV ASS'Y	9-A3
ZC607000	AV CIRCUIT BOARD	3-D2
ZC607300	M6 CIRCUIT BOARD	7-A1
ZC607500	BUTTOM PLATE ASS'Y	2-C4
ZC607600	L CIRCUIT BOARD	7-D2
ZC608700	TOP COVER ASS'Y (USA)	1-A2
ZJ128400	M BASE PLATE ASS'Y	8-D2
ZJ131600	FW CLAW ASS'Y	4-B2
ZJ174500	TUBE SHAFT B ASS'Y	6-A2
ZJ174900	I PLATE R ASS'Y	6-A2
ZJ175000	U PLATE R ASS'Y	6-B1
ZJ175200	S BASE PLATE ASS'Y	6-B3
ZJ175300	4 BASE PLATE ASS'Y	6-B3
ZJ175400	K LEVER ASS'Y	6-C2
ZJ175500	SC.FRAME ASS'Y	6-B1
ZJ175600	MG PLATE ASS'Y	6-D3
ZJ175700	BU LEVER ASS'Y	6-D3
ZJ175800	R CLAW ASS'Y	6-C2
ZJ176000	2 GEAR ASS'Y	5-C1
ZJ176100	SF LEVER ASS'Y	5-D3
ZJ176200	U BASE PLATE ASS'Y	4-B1
ZJ176300	P SHAFT ASS'Y	5-C4
ZJ176400	M INNER PLATE ASS'Y	3-A1
ZJ176500	SOCKET ASS'Y	3-D1
ZJ176700	M CHANGING LEVER ASS'Y	8-C2
ZJ176800	F LEVER ASS'Y	8-C2
ZJ176900	M LEVER ASS'Y	8-C2
ZJ177000	M PIN ASS'Y	8-B2
ZJ177100	STRING HOOK ASS'Y	3-C2
ZJ177300	A CAM ASS'Y	8-A2
ZJ177400	DAMPER ASS'Y	8-A3
ZJ177500	CONNECTING RING ASS'Y	3-B3
ZJ177600	DAMPER HOLDER ASS'Y	8-B3
ZJ177700	FO FRAME ASS'Y	9-D2
ZJ177800	FT FRAME ASS'Y	9-D2
ZJ178000	SR BUTTON BASE ASS'Y	1-A1
ZJ178100	M SWITCH MECH ASS'Y	4-D2
ZJ178500	COIL ASS'Y	4-B2
ZJ178600	A LEVER ASS'Y	4-D2
ZJ178700	SIDE PLATE R ASS'Y	8-B3
ZJ178900	SIDE PLATE L ASS'Y	8-C3
ZJ182900	B SPRING ASS'Y	9-A3
ZJ185600	R LEVER ASS'Y	1-D1
ZJ700500	B SPRING PLATE ASS'Y	9-B3
ZJ700600	CV SWITCH MECH ASS'Y	4-D1
ZJ700700	SV SWITCH MECH ASS'Y	4-D1
ZJ700800	U6 CIRCUIT BOARD	1-A3
ZJ700900	ACC'SHOE BASE ASS'Y	1-C1

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PARTS LIST

MDT-2

PARTS No.	NAME OF PARTS		NOTE
DD012000	LCD 3		7-D1
DQ030900	LED		1-A3·9-B3
DQ032700	TUNGSTEN LAMP		7-C1
DS114400	THYRISTOR		1-A3
DW161000	FP SHIELD 1		
DW161100	FP SHIELD 2		
RAJ-R	LEAD WIRE	RED	L=10■
RBJ-A	LEAD WIRE	BLUE	L=10■
RBJ-B	LEAD WIRE	BLACK	L=10■
RBJ-C	LEAD WIRE	BROWN	L=10■
RBJ-D	LEAD WIRE	ORANGE	L=10■
RBJ-G	LEAD WIRE	GREEN	L=10■
RBJ-H	LEAD WIRE	GRAY	L=10■
RBJ-K	LEAD WIRE	LIGHT GREEN	L=10■
RBJ-M	LEAD WIRE	PURPLE	L=10■
RBJ-P	LEAD WIRE	PINK	L=10■
RBJ-R	LEAD WIRE	RED	L=10■
RBJ-W	LEAD WIRE	WHITE	L=10■
RBJ-Y	LEAD WIRE	YELLOW	L=10■
TDJ-Z	TUBE	D=1.5	L=5■
TKJ-B	TUBE(BLACK)	D=1.0	L=5■

PARTS No.	NAME OF PARTS		NOTE
	PARTS FOR BLACK FINISH (MDT-2B)		
CE556900	U SCREW B		1-A2· B2·C2
CF455300	F COVERING PLATE B		7-C3
CF455400	FRONT COVER B		3-C3
CF455500	IS KNOB		1-B2
ZC634600	TOP COVER B ASS'Y		1-A2
ZC634700	BUTTON PLAT B ASS'Y		2-C4
ZC634900	TOP COVER B ASS'Y (USA)		1-A2
PSK 2 x 4 SH	SCREW		2-C4
PSK 2 x 5 SH	SCREW		2-C4

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PARTS LIST MDT-2

PARTS No.	NAME OF PARTS	NOTE
PUK 1.4x 1	SN SCREW	
PUK 1.4x1.2	SN SCREW	
PUK 1.4x1.4	SN SCREW	
PUK 1.4x1.5	SB SCREW	
PUK 1.4x1.5	SN SCREW	
PUK 1.4x1.8	SN SCREW	
PUK 1.4x 2	SN SCREW	
PUK 1.4x2.5	SN SCREW	
PUK 1.4x 3	BO SCREW	
PUK 1.4x 3	SN SCREW	
PUK 1.4-305	SB SCREW	
PUK 1.4-405	SN SCREW	
PUK 1.4-407	SN SCREW	
PUK 1.4-605	SN SCREW	
PUK 1.4-607	SN SCREW	
PUK 1.4-608	SN SCREW	
PUK 1.7x1.5	SN SCREW	
PUK 1.7x1.8	SN SCREW	
PUK 1.7x 2	SN SCREW	
PUK 1.7x2.5	SN SCREW	
PUK 1.7x 3	SN SCREW	
PUK 1.7x 4	SN SCREW	
PUK 1.7x 5	SN SCREW	
PUK 1.7x 8	SN SCREW	
PUK 1.7-311	SN SCREW	
PUK 1.7-314	SN SCREW	
PUK 1.7-516	SN SCREW	
PUK 2 x1.8	SN SCREW	
PUK 2 x 2	SN SCREW	
PUK 2 x2.2	SN SCREW	
PUK 2 x2.8	SN SCREW	
PUK 2 x 3	SN SCREW	
PUK 2 x3.5	SN SCREW	
PUK 2 x4.5	SG SCREW	
3PUK 1.4x 3	SN SCREW	
3PUK 1.4x3.5	SN SCREW	
3PUK 1.7x 2	SN SCREW	
3PUK 1.7x 3	SN SCREW	
PSK 1.4x1.4	SN SCREW	
PSK 1.4x1.6	SN SCREW	
PSK 1.4x 2	SN SCREW	
PSK 1.4x4.5	SN SCREW	
PSK 1.7x1.5	SB SCREW	
PSK 1.7x 2	SN SCREW	
PSK 2 x2.5	SN SCREW	
PSK 2 x2.8	SN SCREW	
PSK 2 x 4	SE SCREW	
PSK 2 x 5	SE SCREW	
3PSK 1.7x 3	SN SCREW	
PUTB1.4x1.5	SB SCREW	
PUTB1.4x2.5	SN SCREW	
PUTB1.4x 3	SN SCREW	
PUTB1.7x 3	SN SCREW	
PUTB 2 x2.5	SN SCREW	
PUTB 2 x 3	SN SCREW	
PUTB 2 x3.5	SN SCREW	
3PUTB1.4x 2	SN SCREW	
3PUTB1.4x2.5	SN SCREW	
PSTB 2 x 3	SN SCREW	
PUTW1.7x 2	SN SCREW	
PUTW1.7x 5	SN SCREW	
3PUTW1.4x 3	SN SCREW	
ER 0.8	SN E RING	
ER 1.2	SN E RING	
ER 1.5	SN E RING	
NW 1.4-334	UO WASHER	
NW 2-340	BO WASHER	
B 1	BALL	
B 2	BALL	
B 1/16	BALL	

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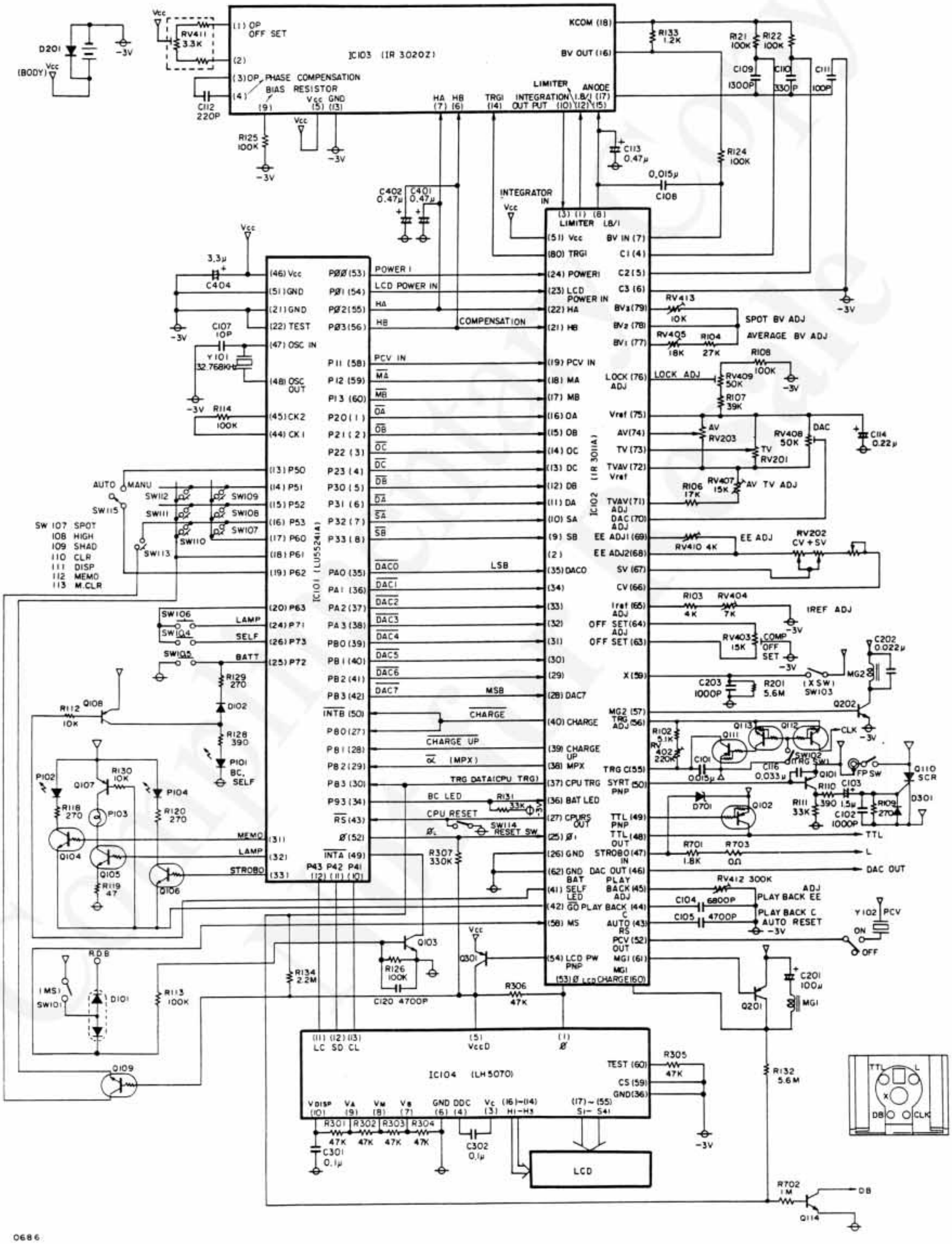
MDT2 CIRCUIT DIAGRAM



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MDT2 WIRING DIAGRAM

WIRING	COLOR
A	BLUE
B	BLACK
C	BROWN
D	ORANGE
G	GREEN
H	GREY
K	LIGHT GREEN
M	PURPLE
P	PINK
R	RED
W	WHITE
Y	YELLOW

SV6 CIRCUIT BOARD
ZC606100

AV CIRCUIT BOARD
ZC607000

L CIRCUIT BOARD
ZC607600

M6 CIRCUIT BOARD
ZC607300

U6 CIRCUIT BOARD
ZJ700800

TV CIRCUIT BOARD
ZC606200

MD SW
ZC453900

K Prism
ZC465200

1	CPU(18)
2	CPU(14)
3	CPU(16)
4	CPU(17)
5	CPU(15)
6	MEMO LED
7	Vcc
8	SCR GATE
9	CLK
10	L
11	TTL
12	GND(-3V)

SW107	SPOT
SW108	HIGH
SW109	SHAD
SW110	CLR
SW112	MEMO

1	NC
2	X
3	Vcc
4	L
5	TTL

CE599700 RIBBON 55

R	MG 1
D	CLK
B	GND (-3V)
A	Vref
P	X

CE599800 RIBBON 56

M	TRG ADJ
C	TRG C
W	MG1 C
H	MG2
Y	TV/AV Vref
G	TV

0686

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A

GENERAL OUTLINE

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A. GENERAL OUTLINE

1. Outline of Product

Model name : OLYMPUS OM-SYSTEM OM-4Ti (NORTH AMERICA: OM-4T)
House code : MDT-2

2. Main Specifications

Type : TTL auto-exposure 35 mm SLR camera
Film format : 24 x 36 mm
Lens mount : Olympus OM mount
Shutter : Electronically controlled cloth focal plane shutter (horizontal action)
Synchronization : Super FP flash contact (full synchro flash)
X contact (synchronized at speeds of 1/60 sec. or slower)
Hot shoe (with X and Super FP flash contacts)
5-pin connector for T-series flash
Synchro socket for X
Exposure meter : Center-weighted, average light measurement, switchable to spot measurement
Spot measuring range: viewfinder microprism
Spot measurement selective in three modes (multi-spot, highlight-, and shadow-based modes)
Measuring range: 0 EV ~ 19 EV (ISO/ASS 100, 50 mm, F1.4)
Automatic exposure control by average light measurement
: TTL direct "off-the film" light measuring with aperture-preferred electronic shutter
Exposure control range: 1 min. ~ 1/2000 sec.
(approx. –5 EV ~ 19 EV, ISO/ASA 100, 50 mm, F1.4, normal temperature and humidity)
Exposure compensation: ±2 EV (1/3 EV steps)
Automatic exposure control by spot measurement
: TTL spot-metering memory system (EE lock)
Exposure control range: 4 min. ~ 1/2000 sec.
(approx. 0 EV ~ 19 EV, ISO/ASA 100, 50 mm, F1.4, normal temperature and humidity)
Multi-spot, highlight-based, and shadow-based modes selectable
Exposure compensation: ±2 EV (1/3 EV steps)
Automatic exposure memory control
: Exposure value memory system, 60-min. limiter
Average light measurement: Memorizes automatic exposure value based on the TTL direct light measurement.
Spot measurement: Memorizes EE lock value.
Manual exposure control : B, 1 sec. ~ 1/2000 sec.; mechanical exposure speed: 1/60 sec.
Synchronizes with X contact at 1/60 sec. or slower speeds
Flash exposure control : Super FP Flash mode (when using the Full Synchro Flash F280)
TTL auto control: synchronizes with shutter speeds from 1/60 to 1/2000 sec.
Manual control: synchronizes with shutter speeds from B, 1 to 1/2000 sec.
Flash mode (when using a T-series Flash or Full Synchro Flash F280),
TTL auto control: synchronizes with shutter speeds of 1/60 sec. and slower.

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Film speed	:	ISO/ASA 6 ~ 3200
Film advance	:	Film advance lever with 130° for one long or 30° for several short strokes and pre-advance. Motor drive and winder usable
Film rewind	:	Rewind crank (motorized rewind with Motor Drive 2 possible)
Viewfinder	:	Viewfinder with dioptric correction ranging from +1.0 to –3.0 diopters Provided with dioptric correction locking mechanism Interchangeable focusing screen (microprism/split image-matte type screen as standard), Type 1-13 Actual picture field: 97% vertical and horizontal Magnification: 0.84X at infinity.with –0.5 diop. and 50 mm lens
Viewfinder information	:	LCD multi-mode display; built-in illuminator (10-sec. limiter) Display limiter 120 sec. Appropriate shutter speed: bar display with 1/3 EV steps between 1 and 1/2000 sec. Spot measurement: Luminance of subject by dot display, calculated values by bar display, and SPOT, HILIGHT, and SHADOW by mark display Completion of flash charging: Green LED lights on the ▨ mark. Flashing of the flash unit: Display by blinking green LED Over or under-exposure by blinking OVER or UNDER mark. Manual exposure: Display by constant-point coincidence method, and selected shutter speed displayed Memory exposure: MEMO mark to be indicated when memorized, MEMO mark to be blinked when completed
Mirror	:	Multilayer coated large-sized quick-return mirror
Self-timer	:	12-second delay electronic self-timer
Battery check	:	3-level display with LED and alarm sound (built-in 30-sec. timer) Automatic locking when batteries exhausted
Power source	:	Two 1.5V silver-oxide batteries SR44 or two alkaline manganese batteries LR44
Camera back	:	Removable hinge type with memo holder Interchangeable with Recordata Backs and 250 Film Back
Dimensions	:	136 (W) x 84 (H) x 50 (D) mm (body only)
Weight	:	510 grams (body only)

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B

INSPECTION CRITERIA

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B. INSPECTION CRITERIA

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This Chapter of Inspection Criteria describes, in principle, those inspection items which differ from those for the OM-4.

Major check points	Relative functions to be checked	Checking methods and criteria
1. Viewfinder information	1. Start of indication	Indication should start by: • Setting the mode selecting lever from AUTO to MANUAL position, or from MANUAL to AUTO position. • Gently pressing the release button (when a lens is mounted) • Turning ON or OFF the power switch of an exclusive flash • Completing photographing • Operating the clear lever • Carrying out battery check.
	2. Disappearing of indication	Indication should disappear in 120 ± 15 seconds after it comes on (indication time should be automatically renewed during operation) Otherwise, it should disappear if the shutter dial is set to B, mechanical 1/60.
	3. Illumination time of indication	Indication should go off in 10 ± 3 seconds after turning on the switch (illumination is possible only while indicating).
	4. Lighting off of the indication	Indication should be lit off in 10 seconds after it is lit on, by effecting battery check, or by pressing the release button (Main SW ON).
2. ISO dial	1. Lifting force	500 ± 150 g
3. ± correction dial	1. Clicking force	900 ± 200 g
4. Self lever	1. Lever-pulling force	200 ± 30 g
	2. Lever-turning force	200 ± 80 g
5. X contact	1. Delay time	0.1 ~ 1.5 ms (X contact is turned on immediately after the 1st shutter blade is fully opened)
	2. Insulation resistance	500 V, 30 MΩ or more
6. Dark current		18 μA or less (when using ammeter)

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Major check points	Relative functions to be checked	Checking methods and criteria
7. Consumption current	1. When illuminating viewfinder interior	10 ± 3 mA
	2. When charging is completed with the flash power switch ON	6 ± 2 mA
	3. In 128 seconds after turning on the flash power switch	3 mA or less
	4. When using a self-timer	10 ± 2 mA
	5. When checking batteries	12 ± 2 mA
8. Combination with F-series flash (Camera: AUTO mode, Flash: TTL AUTO)	1. Dependability of operation	• When mounting and switching on the F-series flash in SPOT or MEMO mode, the mode should be changed directly into an average direct measurement mode. • Flash should emit light at low speeds of 1/60 sec. or less. • If the flash is in the MANUAL mode while the camera is in the AUTO mode, the flash should effect full-power flashing.
	2. Dependability of indications	• When turning on the flash power switch, a triangle (▷ 60 ◁) should be lit on at the left and right sides of the SS 1/60. • ▨ mark should come on when flash charging is completed. The ▨ mark LED should be lit off for 2 seconds after flashing. This mark should blink if appropriate light intensity is obtained after flashing. • If the intensity of the flash light is below 0.5 ± 0.3 EV or the flash has not emitted light at the speed of 1/60, the marking "UNDER" should blink. • If the intensity of the flash light is above 1 ± 0.3 EV, the marking "OVER" should come on. • Both LCD indication and charging mark should go off in 120 seconds.

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Major check points	Relative functions to be checked	Checking methods and criteria
9. Combination with F-series flash (Camera: AUTO mode, Flash: Super FP mode)	1. Dependability of operation	· The flash should emit light at any shutter speeds. (Since flashing at 1/60 or slower speeds may result in unevenly exposed pictures, the Super FP mode should be used at speeds above 1/60.)
	2. Dependability of indications	· When turning on the flash power switch, a triangle (▷ 60 ◁) should be lit on at the left and right sides of the SS1/60. · ▨ mark should come on when flash charging is completed.

10-A. Automatic exposure accuracy

MS5018 (OM Lens 50 mm F1.8) (F4), K value = 1.3, Battery voltage 3 ± 0.05V, ISO 100

Luminance	Tolerance limit
BV 15	0 –0.7 ~ +0.75 EV
BV 14	0 ± 0.4 EV
BV 10	0 ± 0.4 EV
BV 7	0 ± 0.4 EV
BV 4	0 ± 0.4 EV

B. ISO selecting accuracy

MS5018 (OM Lens 50 mm F1.8) (F4), BV7, ± 0 correction, ISO 100 based on SS1/8

ISO	Tolerance limit
6 (2S)	± 0.7 EV
12 (1/1)	± 0.6 EV
25 ~ 50	± 0.4 EV
100 (1/8)	0 EV
200 ~ 400	± 0.4 EV
800 ~ 1600	± 0.6 EV
3200 (1/250)	± 0.9 EV

Selecting steps: 0.6 EV or more per 1 EV between each ISO from ISO 6 to 800.

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C. ± correction accuracy

MS5018 (OM Lens 50 mm F1.8) (F4) BV7, ISO 100, ±0 EV, based on SS1/8

± correction values	Tolerance limit
–2 EV (1/30)	± 0.4 EV
–1 EV (1/15)	± 0.3 EV
±0 EV (1/8)	± 0
+1 EV (1/4)	± 0.3 EV
+2 EV (1/2)	± 0.4 EV

Correcting steps: 6 EV or more per 1 EV.

11. Manual shutter speed

Shutter speeds	Mean value	Tolerance limit	
1/2000	0.49	0.3 ~ 0.75 ms	0 –0.70 ~ +0.62EV
1/1000	0.98	0.788 ~ 1.20 ms	0 ±0.3 EV
1/500	1.95	1.59 ~ 2.40 ms	0 ±0.3 EV
1/250	3.91	3.40 ~ 4.49 ms	0 ±0.2 EV
1/125	7.82	6.80 ~ 8.97 ms	0 ±0.2 EV
1/60	15.6	13.6 ~ 17.9 ms	0 ±0.2 EV
1/30	31.3	27.2 ~ 35.9 ms	0 ±0.2 EV
1/15	62.5	54.4 ~ 71.8 ms	0 ±0.2 EV
1/8	125	109 ~ 143 ms	0 ±0.2 EV
1/4	250	218 ~ 287 ms	0 ±0.2 EV
1/2	500	435 ~ 574 ms	0 ±0.2 EV
1/1	1000	871 ~ 1149 ms	0 ±0.2 EV
Meca 1/60	15.6	14.6 ~ 19.9 ms	0 –0.1 ~ +0.35 EV

Battery voltage: 3.0 ±0.05 V

Curtain speed: Average 10.9 $^{+0.1\ ms}_{-0.15\ ms}$ at 20°C (Average of 25 shots except first one.)
Difference between 1st and 2nd blades: Average 0.06 ms or less
(average of 25 shots except first one)

Fluctuation: Measured values of 25 shots except first one should be all within th criteria.

Uneven exposure: 1/1000 ~ 1/2000 = 0 ± 0.35 EV (values of channels A and C against channel B of the shutter tester)
1/500 or less = 0 ±0.35 EV (values of channels A and C against channel B of the shutter tester)

Difference between adjacent shutter times:
1/1 ~ 1/1000 = 1 ±0.3 EV
1/1000 ~ 1/2000 = 1 ±0.4 EV

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12. Indication of exposure

A. Indicating accuracy (average photometry)
MS5018 (OM Lens 50 mm F1.8) (F4), ISO 100

Luminance	Indication	Tolerance limit
BV 16	OVER	
BV 14	1/1000	± 0.5 EV (1 segment)
BV 11	1/125	± 0.5 EV (1 segment)
BV 8	1/15	± 0.5 EV (1 segment)
BV 4	1/1	± 0.5 EV (1 segment)

Allowance for SPOT at BV8: ± 0.5 EV (1 segment)

B. ISO selecting accuracy
MS5018 (OM Lens 50 mm F1.8) (F4), ISO 100, based on SS 1/15

ISO	Indication	Tolerance limit
3200	1/500	± 0.5 EV (1 segment)
1600	1/250	± 0.5 EV (1 segment)
800	1/125	± 0.5 EV (1 segment)
400	1/60	± 0.5 EV (1 segment)
200	1/30	± 0.5 EV (1 segment)
100	1/15	± 0 EV
50	1/8	± 0.5 EV (1 segment)
25	1/4	± 0.5 EV (1 segment)
12	1/2	± 0.5 EV (1 segment)
6	1/1	± 0.5 EV (1 segment)

Steps between ISO values: 2/3 EV (2 segments) or more per 1 EV.

C. ± correction accuracy
MS5018 (OM Lens 50 mm F1.8) (F4), ISO 100, ± 0 EV, based on SS1/15

Correction value	Indication	Tolerance limit
–2 EV	1/60	± 0.5 EV (1 segment)
–1 EV	1/30	± 0.5 EV (1 segment)
±0 EV	1/15	± 0 EV (1 segment)
+1 EV	1/8	± 0.5 EV (1 segment)
+2 EV	1/4	± 0.5 EV (1 segment)

2/3 EV (2 segments) or more per 1 EV.
Difference between automatic exposure and indicated speed should be 1 EV or less (when using an average subject).

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C

DISASSEMBLING PROCEDURES

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C. DISASSEMBLING PROCEDURES

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* For other items, refer to the OM-4 (MDY-2)

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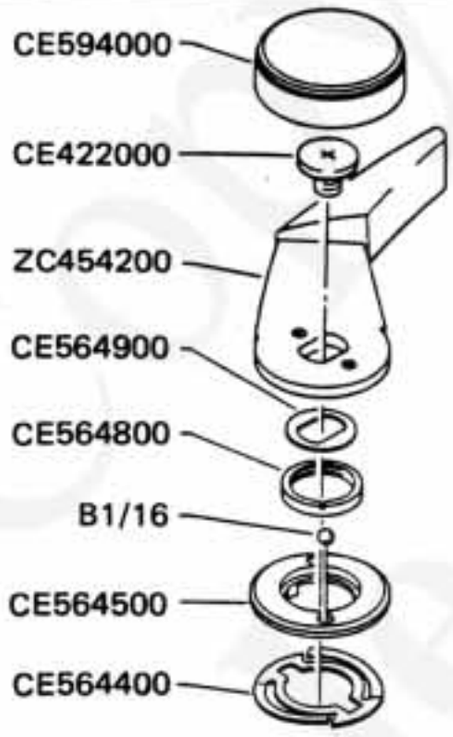
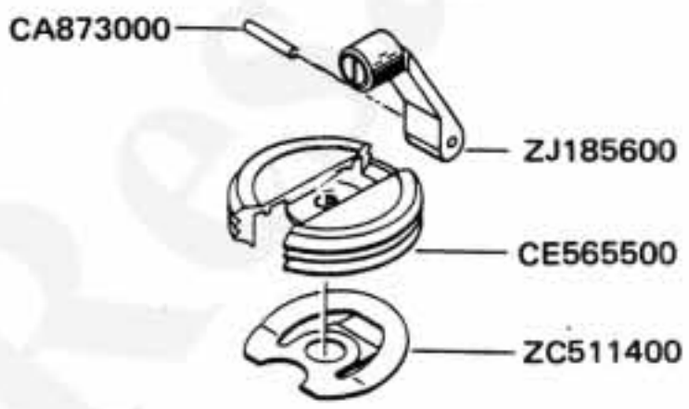
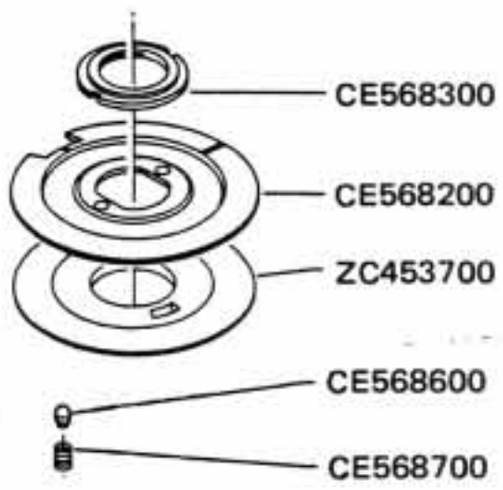
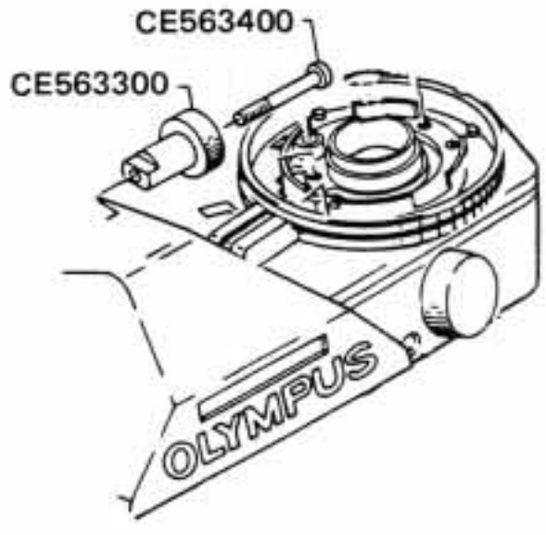
I. Removing the top plate

Main parts	Parts to be removed	Q'ty	Removable parts	Remarks
1. Lever	Lever cap CE594000 Screw CE422000 Lever nut CE564800	1	FL Lever ZC454200 Lever connector CE564900 B1/16 (2) spring holder CE564500 FW lever spring CE564400	
2. R knob	R knob CE565500	1	R lever ZJ185600 R lever pin CA873000 R lever spring ZC511400	
3. SV dial	Cover holder CE568300	1	ASA covering plate CE568200 SVdial ZC453700 SV click CE568600 SV spring CE568700	
4. IS knob	IS screw CE563400	1	IS knob CE563300	

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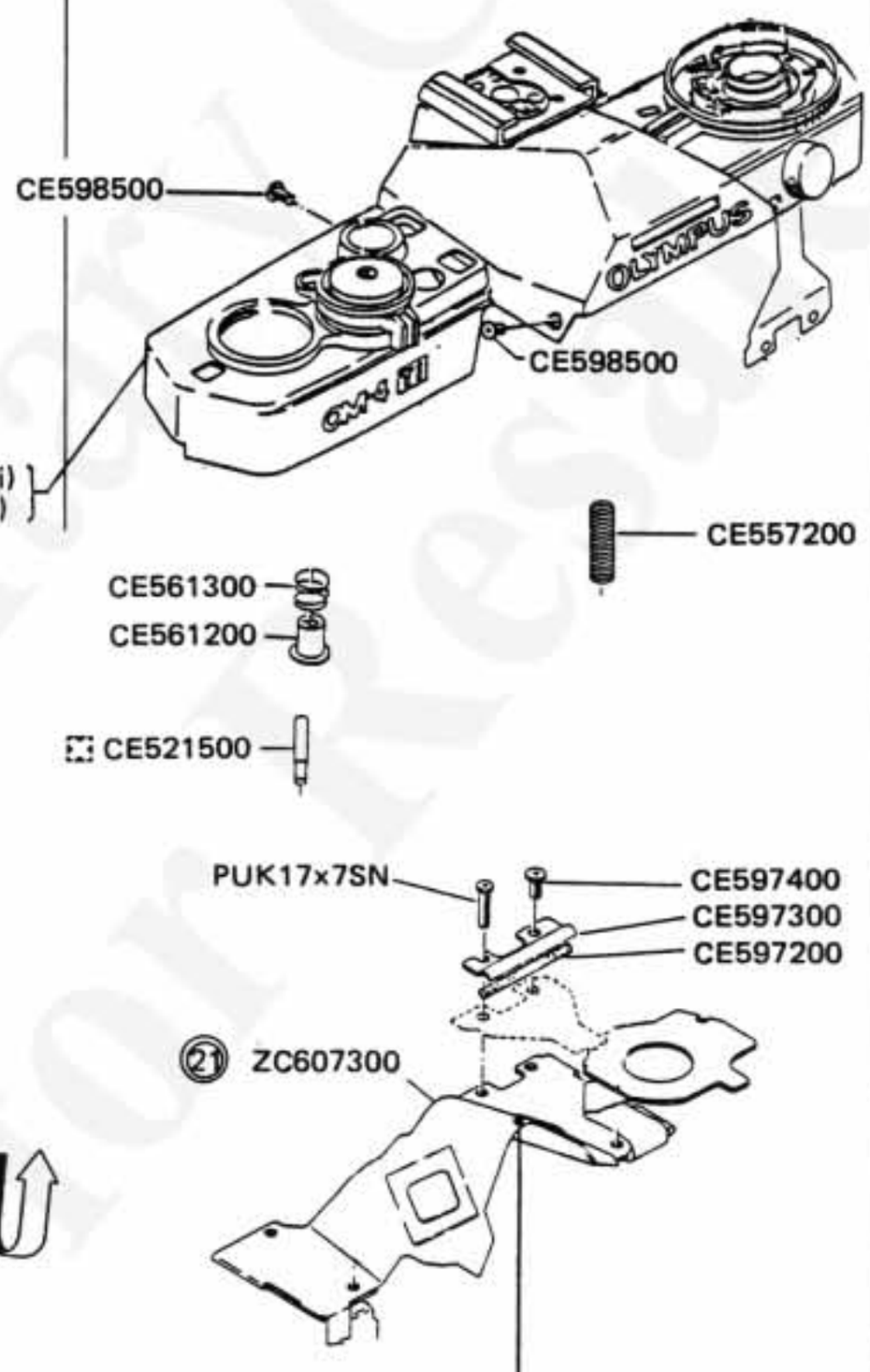
Main parts	Parts to be removed	Q'ty	Removable parts	Remarks
5. Top cover ass'y	U screw T CE598500	4	Top cover ass'y (for OM-4Ti) ZC606300	If a flexible connector (U6 circuit board) of the top cover is connected to the main body, be careful not to forcibly handle the top plate so that the flexible connector may not be broken.
	RBJ-M50	1	(for OM-4T) ZC608700	
	FP shield 2, DW161100	1	RK button CE561200	
	C screw CE597400	1	RK spring CE561300	
	PUK1.7x7SN	1	P rod CE521500	
			Key spring CE557200	
			C rubber CE597200	
			C holder CE597300	



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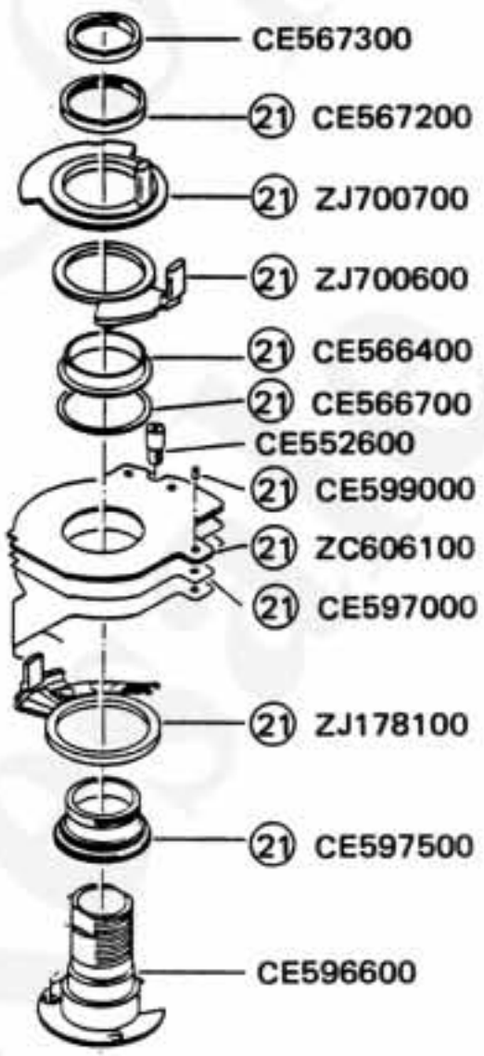
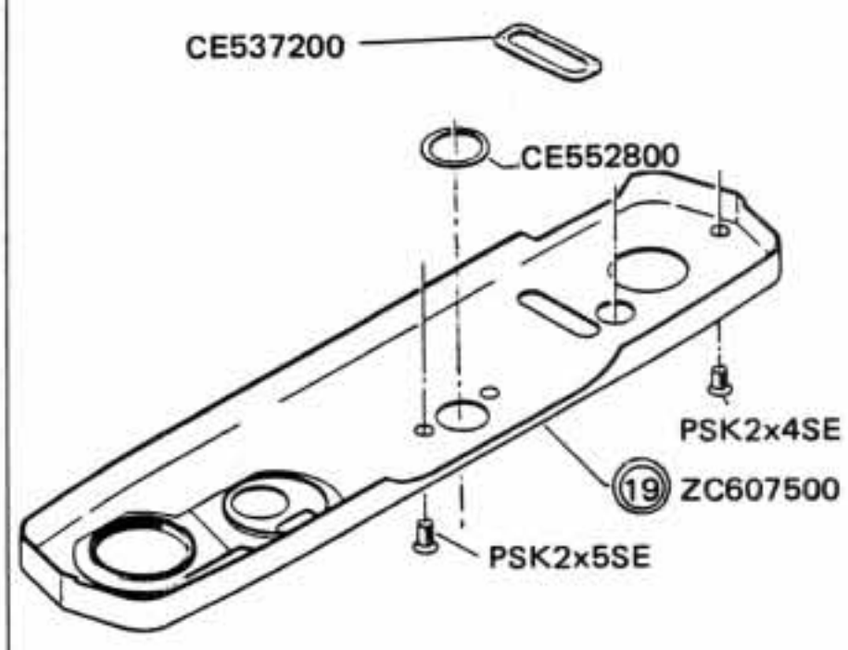
II. Removing the M6 circuit board

Main parts	Parts to be removed	Q'ty	Removable parts	Remarks
1. SV circuit board	SV nut 2 CE567300	1	SV circuit board ZC606100	Take out of the R shaft holder the SV circuit board with those parts prefixed with "21" as they are.
2. Bottom plate	PSK2x4SE PSK2x5SE	2 2	Bottom plate ZC607500 T mount seal CE552800 SW packing CE537200	





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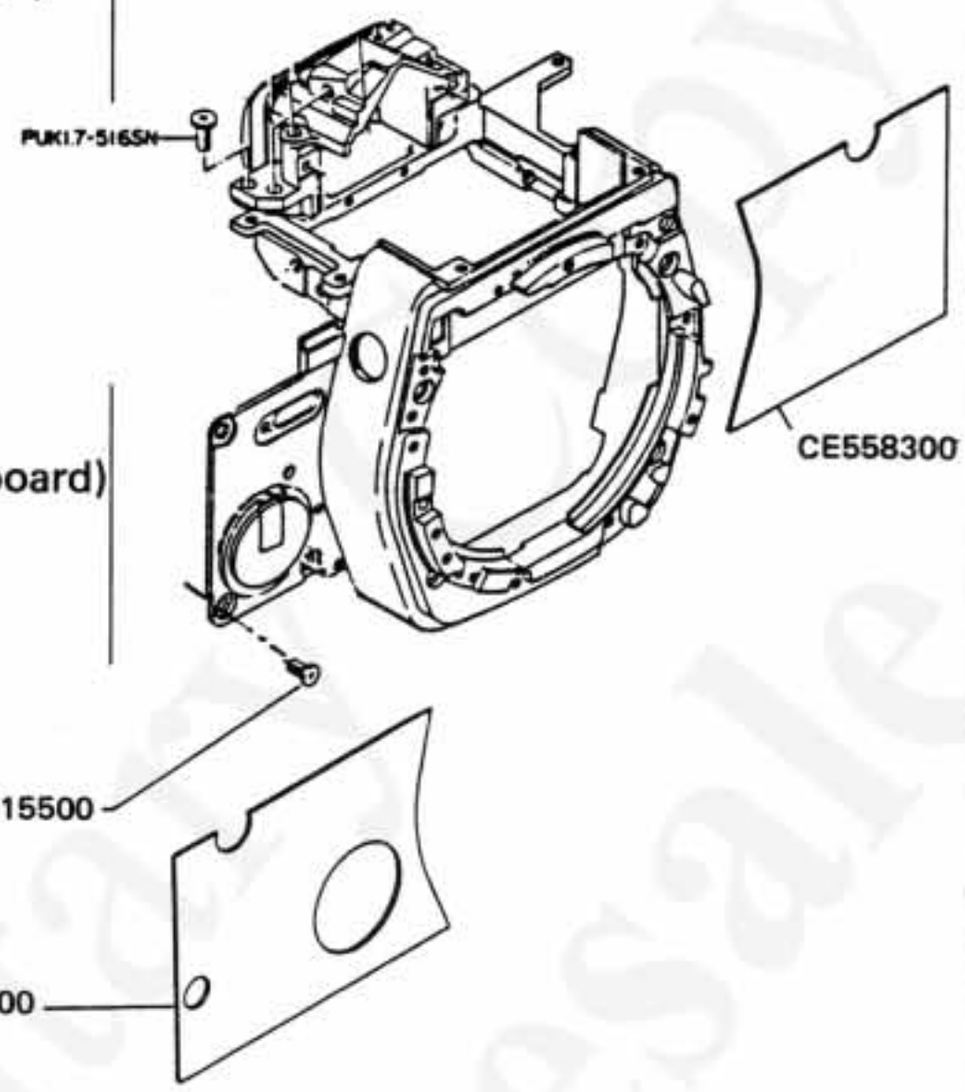
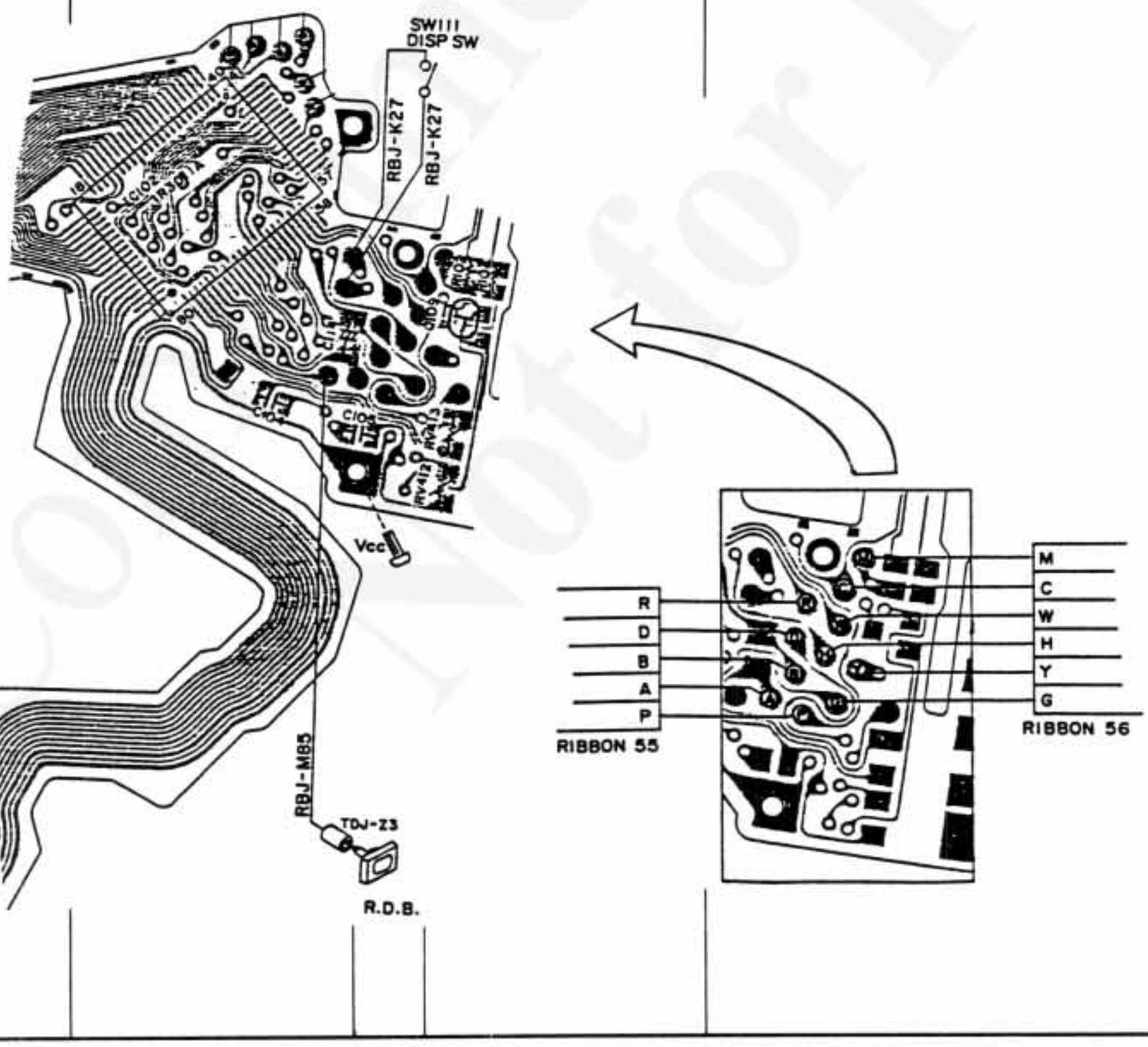
Main parts	Parts to be removed	Q'ty	Removable parts	Remarks
3. Front plate	Front leather L CE558300	1	Front plate ass'y	
	Front leather R CE558400	1		
	F screw CA915500	5		
	PRJ-K27	2	(DISP SW)	
	Ribbon wire 55 CE599700	1	(TV6 circuit board)	
	Ribbon wire 56 CE599800	1		
	RBJ-M85	1	(R.D.B)	
	PUK1.7-516SN			





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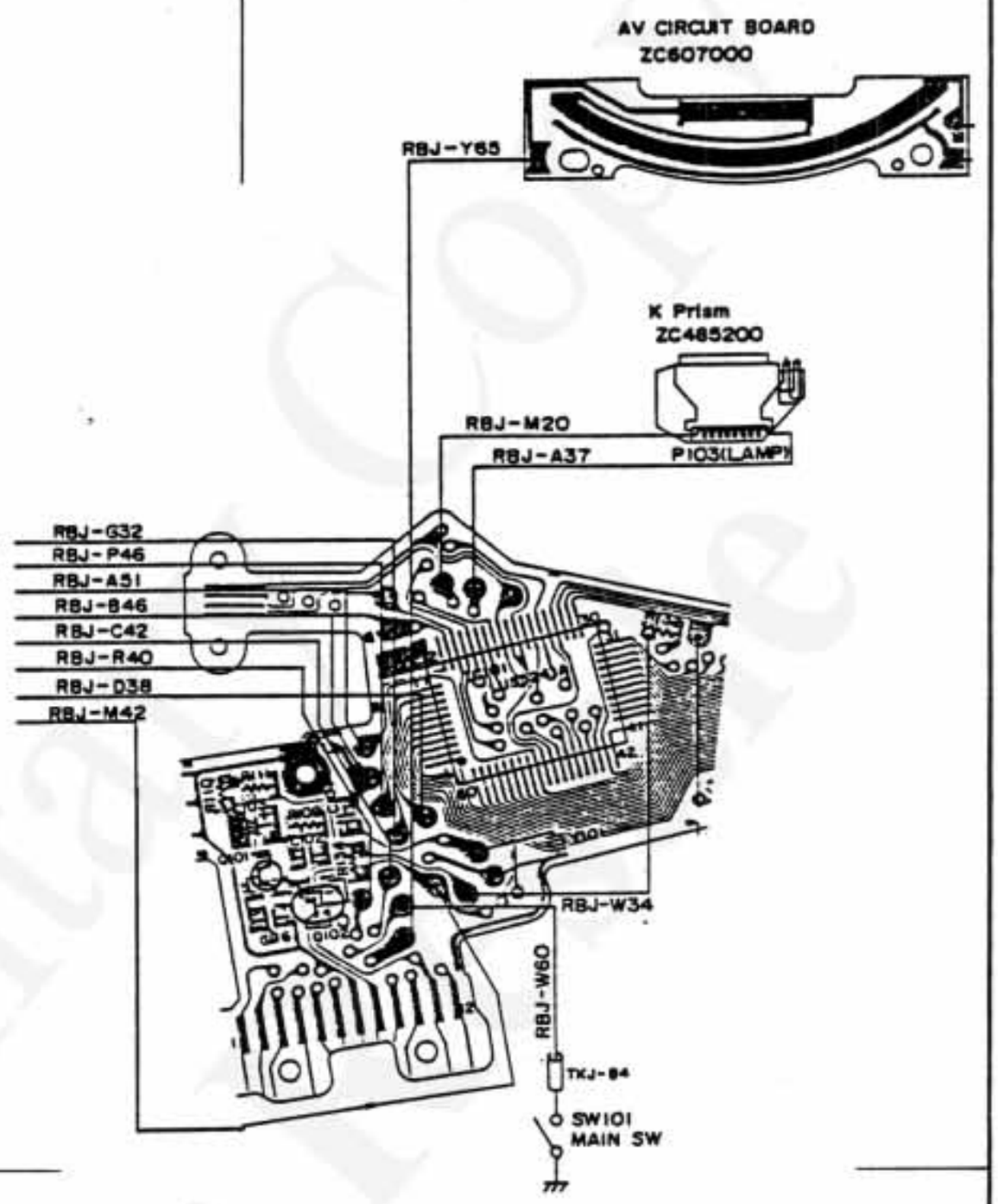
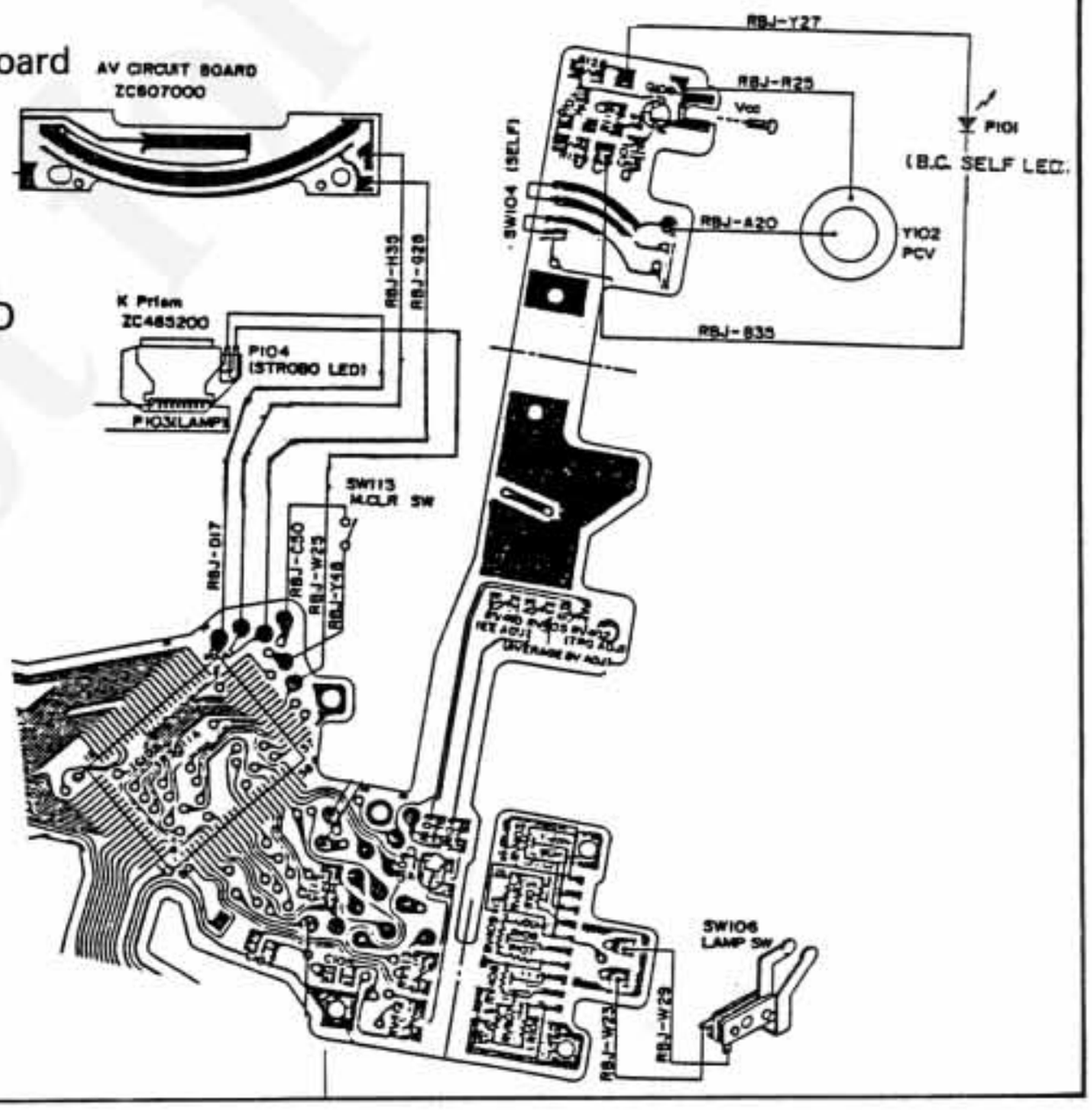
Main parts	Parts to be removed	Q'ty	Removable parts	Remarks
4. Lead wires (left)	RBJ-M42 RBJ-R40 RBJ-D38 RBJ-C42 RBJ-G32 RBJ-A51 RBJ-P46 RBJ-B46		L circuit board	
	RBJ-W60		Main SW	
	RBJ-M20 RBJ-A37		Lamp	
	RBJ-Y65		AV circuit board	
5. Lead wires (right)	RBJ-D17 RBJ-W25		Flash LED	
	RBJ-H35 RBJ-G28		AV circuit board	
	RBJ-C50 RBJ-Y48		M. CLR SW	
	RBJ-Y27 RBJ-B35		B.C. self LED	
	RBJ-R25 RBJ-A20		PCV	
	RBJ-W23 RBJ-W29		Lamp SW	

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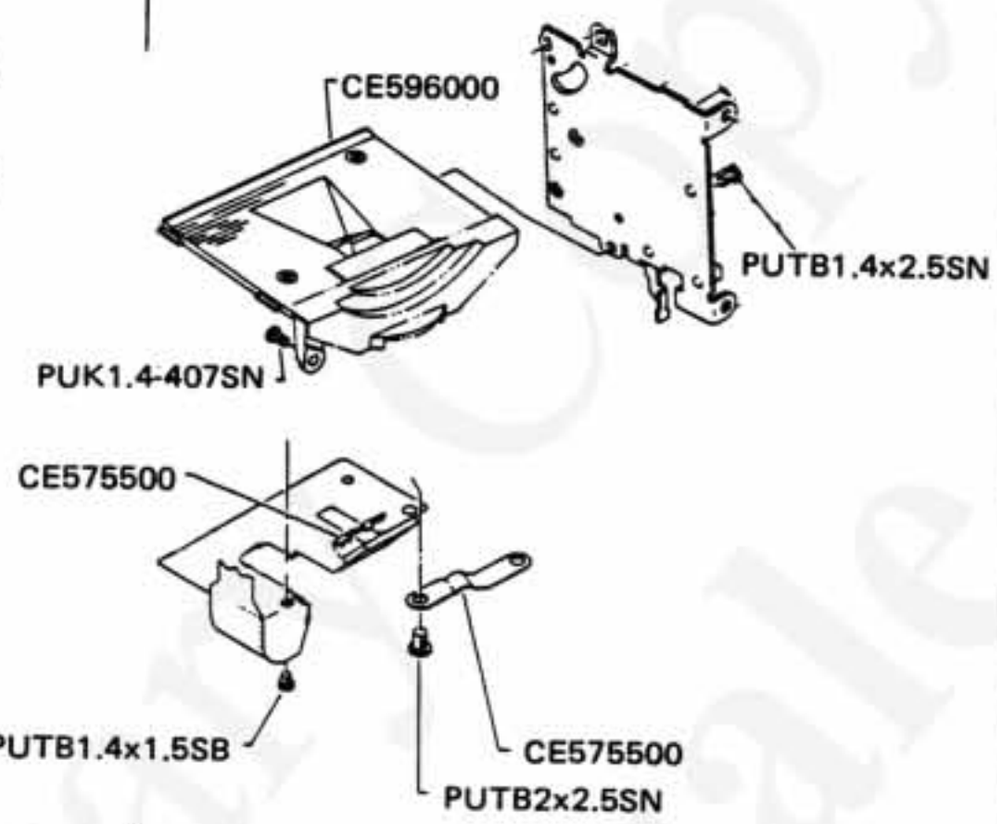
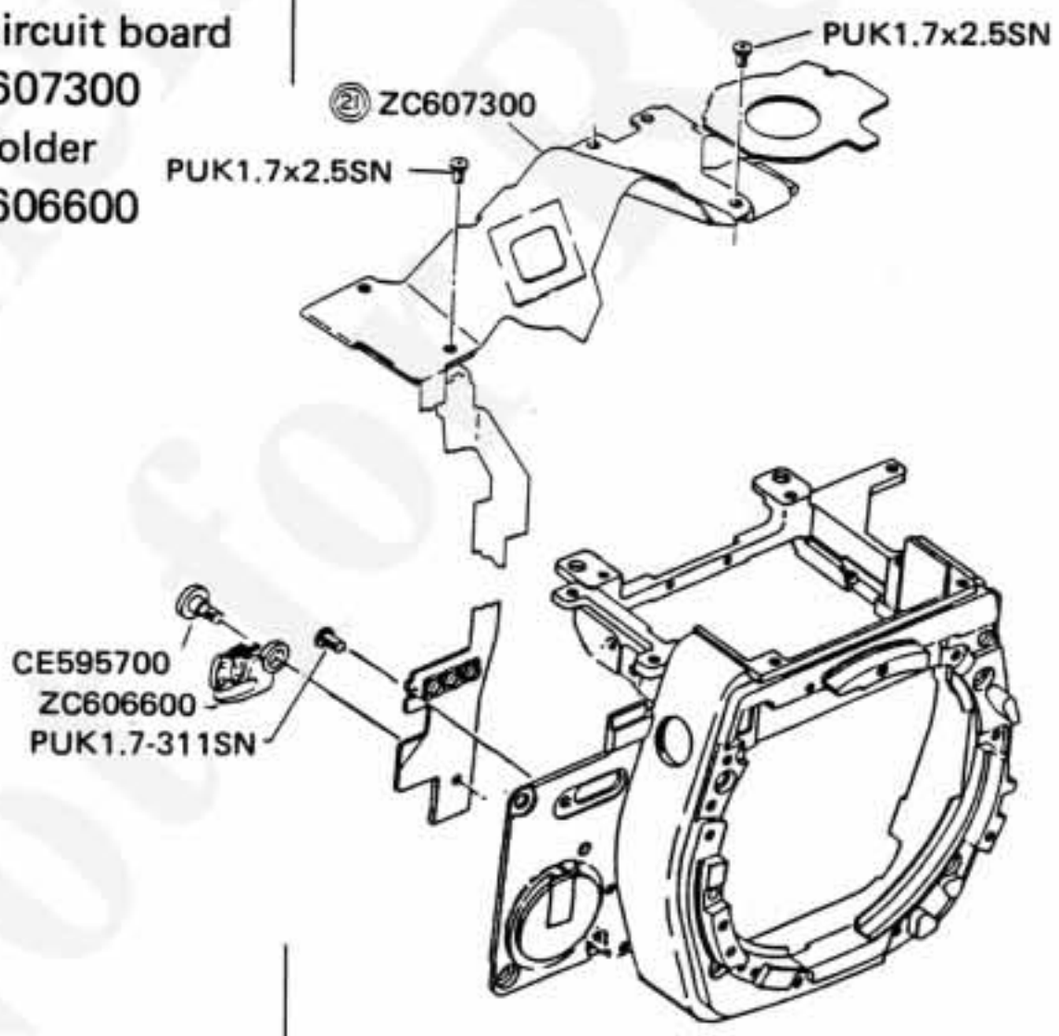
Main parts	Parts to be removed	Q'ty	Removable parts	Remarks
6. L cover plate	PUK1.4-407SN PUTB1.4x2.5SN PUTB1.4x1.5SB PUTB2x2.5SN	1 1 2 2	L cover plate CE596000 L stopper CE575600 L plate CE575500	
7. M6 circuit board	PUK1.7x2.5SN PUK1.7-311SN SE screw 2 CE595700	3 1 1	M6 circuit board ZC607300 SE holder ZC606600	

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D

REASSEMBLING AND ADJUSTING PROCEDURES

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D. REASSEMBLING AND ADJUSTING PROCEDURES

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I. Checking and adjusting exposure controlling/ indicating circuits

Adjust the following items after replacing an M circuit board:

1. SVCV matching of the M circuit board
2. Adjusting TV
   adjusting reproducing EE (manual speed of 1/8)
   adjusting Treg. (manual speed of 1/2000)
3. Adjusting EE
   adjusting direct EE
4. Adjusting indication
   adjusting BV, AUTO (average AUTO)
   adjusting SPOT

The item 2) to 4) are adjusting items which must be adjusted whenever repair is effected, even if no M circuit board is replaced.

Other items have been factory-adjusted.

1. Adjusting M circuit board

The adjusting items of the M circuit board (namely, SVCV matching) include:

1) Adjusting Vref,
2) Adjusting Iref,
3) Adjusting AV/TV,
4) Adjusting DAC, and
5) Adjusting CV indication.

These items must be adjusted in this order. I Vref is adjusted, the subsequent four item have be to adjusted as well. At the same time you have to check and adjust TV and EI indications.

○ Preparation for adjustment

1. Tools and instruments to be used.
   1) Lens (MS5018)
   2) Paper clip, small
   3) Lead wire (approx. 5cm long) x 1
   4) Digital voltmeter
   5) Thermometer
   6) VR adjusting wrench
   7) Stabilizer (DC 3V)

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2. Preparatory works

1) Set the M6 circuit board as assembled into a front plate ass'y (Namely, remove the front plate ass'y from the camera body, as it is.)

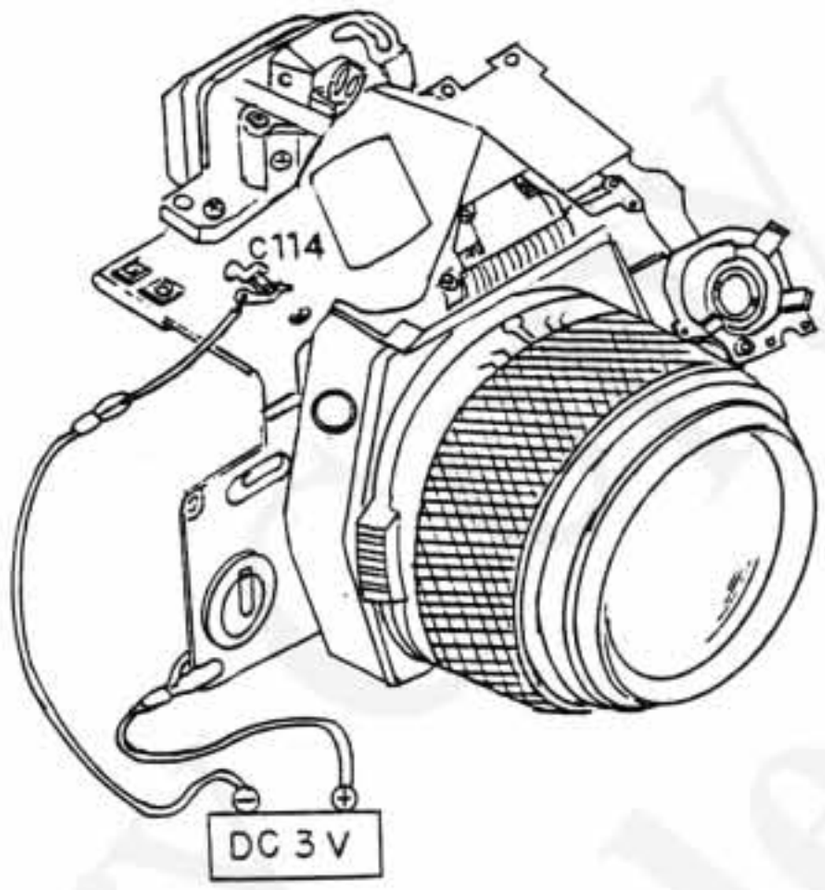
2) Solder a lead wire prepared above to the M6 circuit board at the C1-14 negative side of the black lead wire round (–GND).

3) Connect the stabilizer (DC 3V).
   - ○ Positive terminal to the camera body
   - ○ Negative terminal to the lead wire of the – GND as soldered in the item 2) above.

4) Hold the check program terminal of the M6 circuit board with a paper clip to short-circuit it.

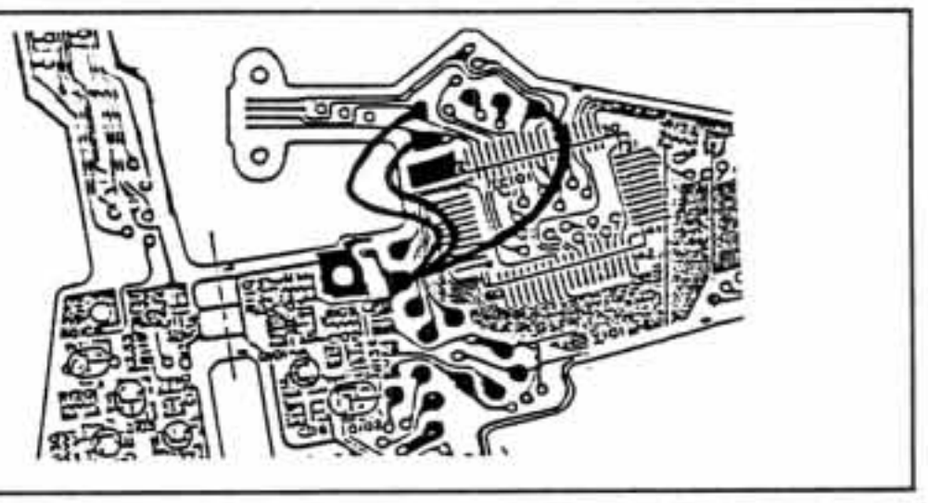
* Be careful not to allow the paper clip to contact the front plate; otherwise, the check program is reset.

* A single paper clip may sometimes cause poor contact with a test terminal, thereby the check program not being selected. It is recommended, therefore, to insert an aluminum foil between the paper clip and the test terminal.



A method to select check program without using a paper clip:

* Solder three lead wires (approx. 5cm long) to the M6 circuit board as illustrated. (This is more reliable than using a paper clip.)



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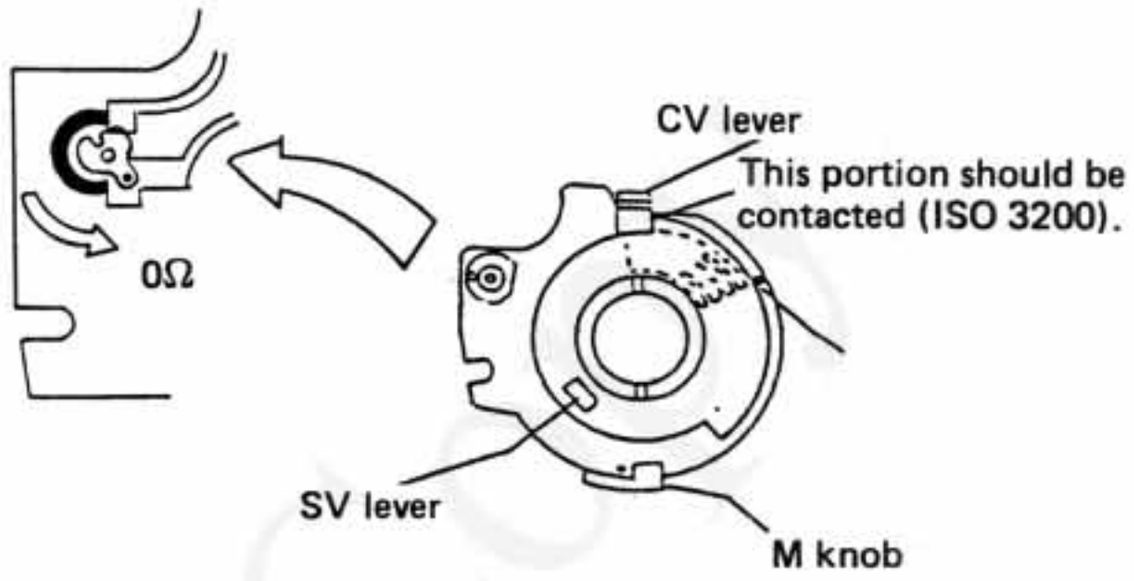
5) Set the CV to zero EV (namely, no correction is effected).

6) Set ISO to 3200.

7) Set the resistance for ± correction to 5Ω or less. [Turn the contact of the variable resistor counterclockwise and remove from the resistance (black patterned portion)].



3. Driving a check program

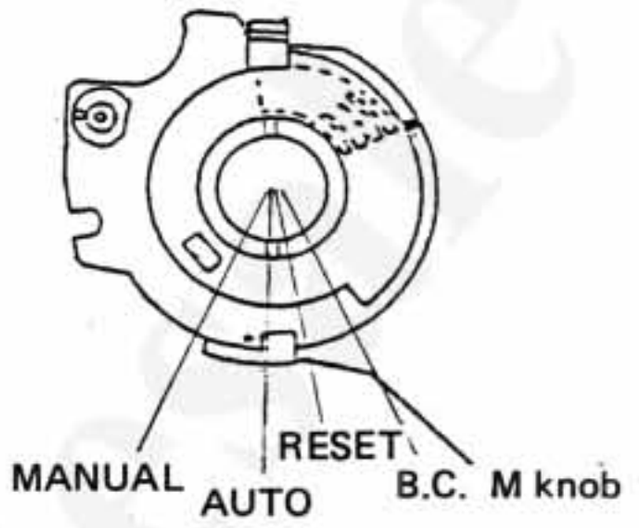
1) Set the shutter dial to a speed other than B and the mechanical 1/60.

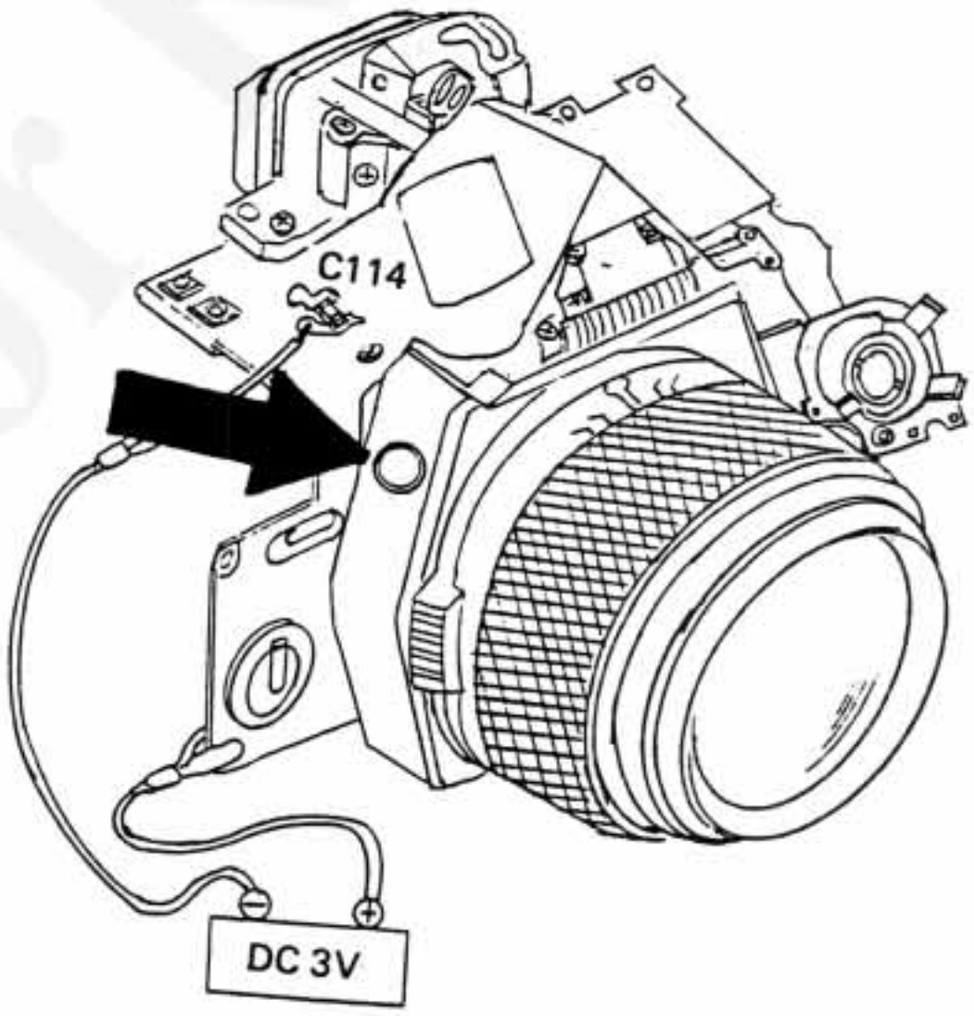
2) Mount a lens. Any F No. is acceptable.

3) Reset the mechanism. Manipulate the M knob; since the reset switch is mounted before the battery check position, set the M knob to that position temporarily for resetting purpose and to the AUTO mode position.

4) Set the mode to AUTO or MANUAL (rather than the self mode).

5) Start the program by pressing the LAMP switch.





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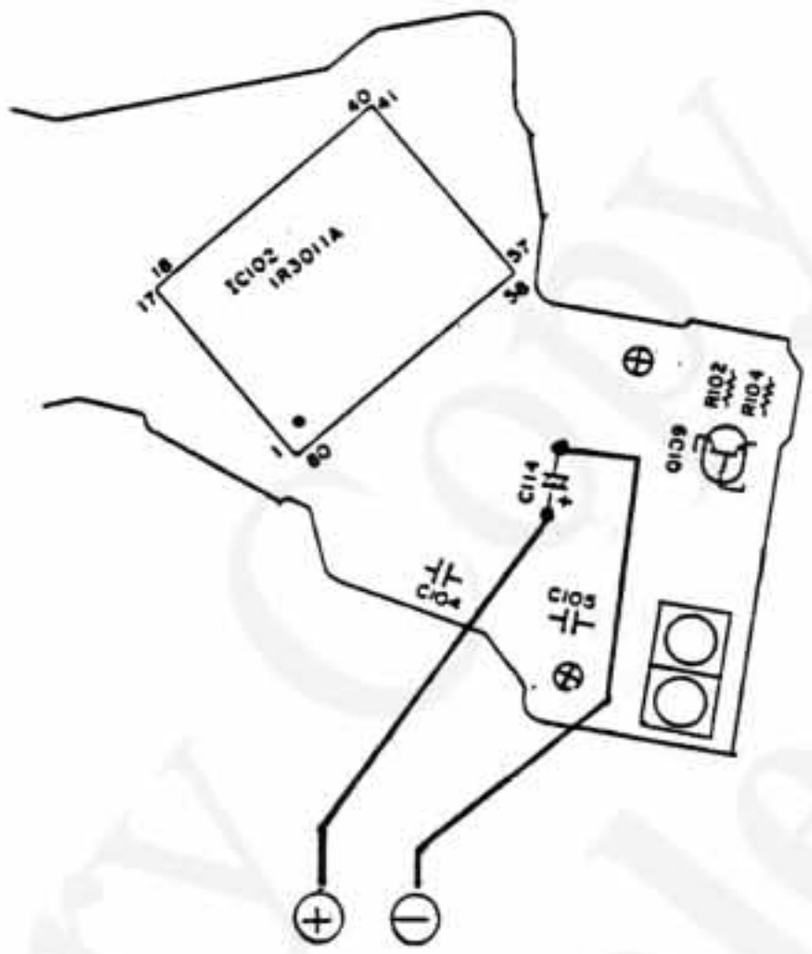
○ Adjusting Vref

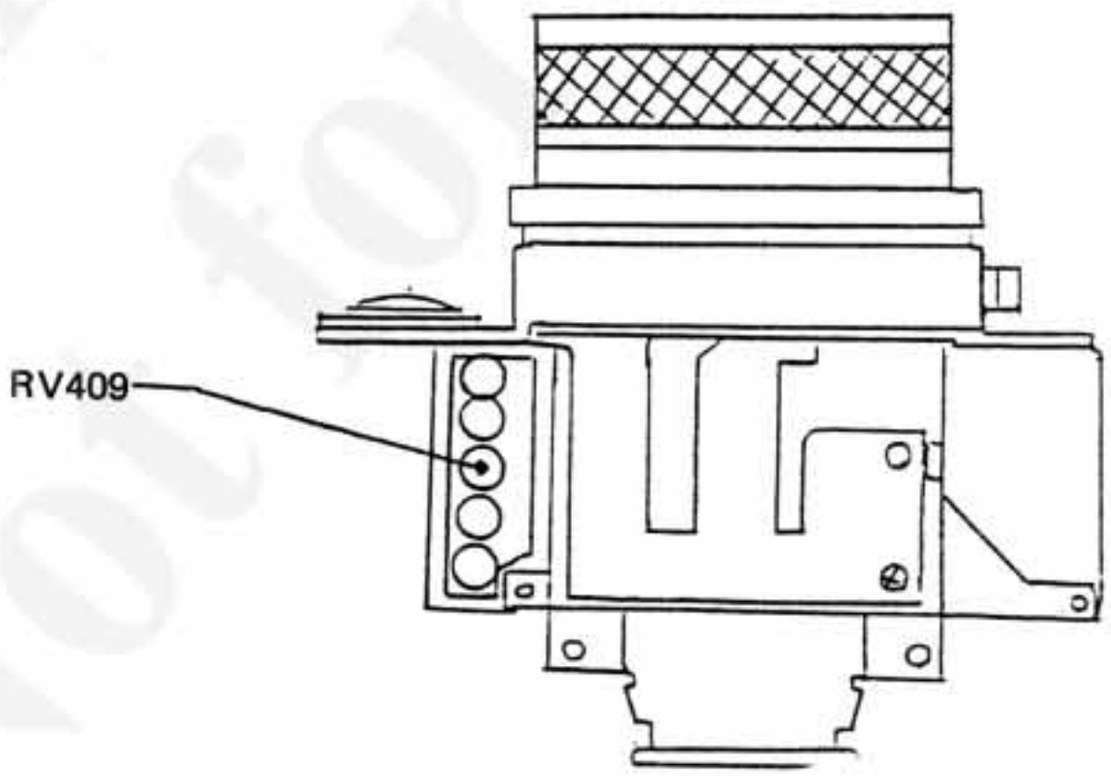
- Standard value
  1.790V ± 5mV

- Measuring method
  Measure voltage between both end GND's (–) of the C114 and the Vref.



Digital voltmeter

- Adjusting method
  Should the measured value be off the standard, adjust it by means of the RV409.



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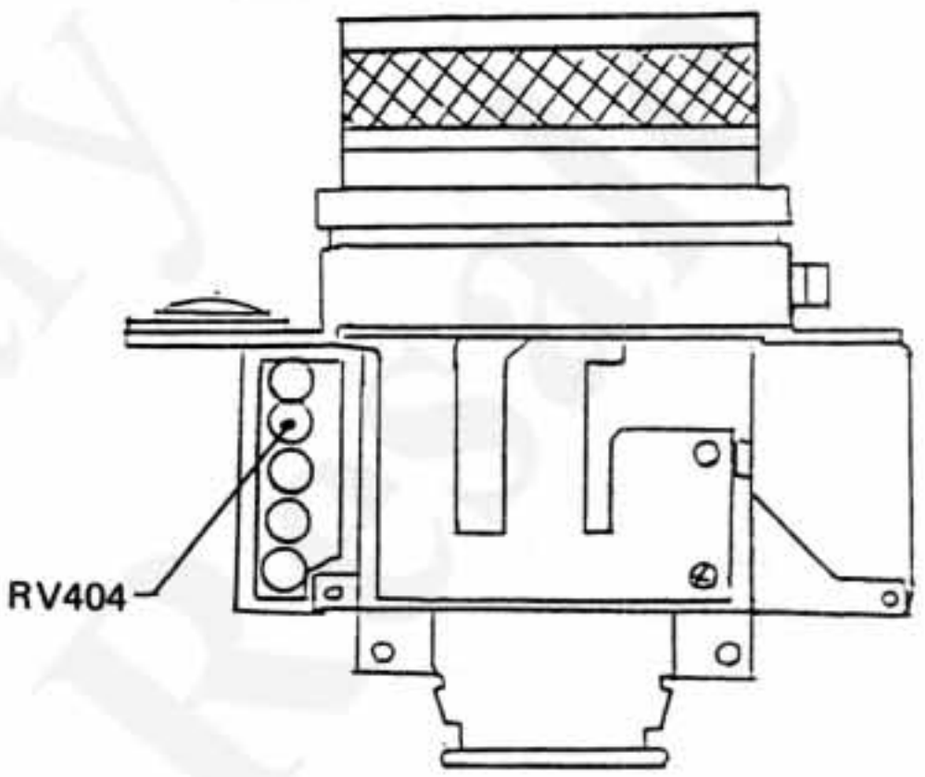
○ Adjusting Iref

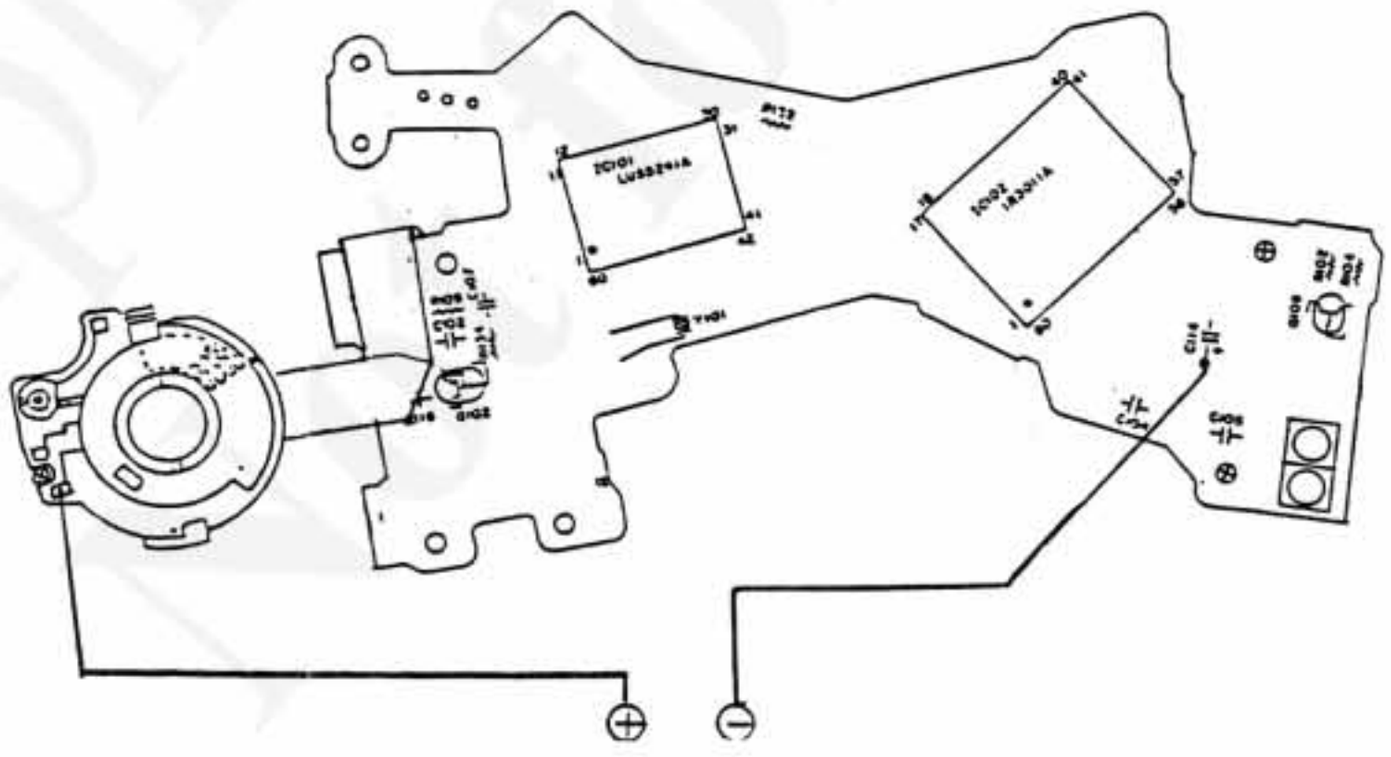
- Standard values (differ depending on temperatures as shown below)

  14° —— 192mV ± 1mV
  16° —— 193mV ± 1mV
  18° —— 194mV ± 1mV
  20° —— 195mV ± 1mV
  22° —— 196mV ± 1mV
  24° —— 197mV ± 1mV
  26° —— 199mV ± 1mV
  28° —— 200mV ± 1mV
  30° —— 201mV ± 1mV

- Measuring method
  1) Measure temperature at the measuring point.
  2) Measure voltage between Vref (where Blue lead wire is soldered) and the terminal EEADJ2 of the SV circuit board.
  3) Confirm that the value just measured corresponds to the standard voltage at the temperature of the voltage-measuring point, by referring to the table above.

- Adjusting method
  Should the measured value be off the standard, adjust it by means of the RV404.





Digital voltmeter

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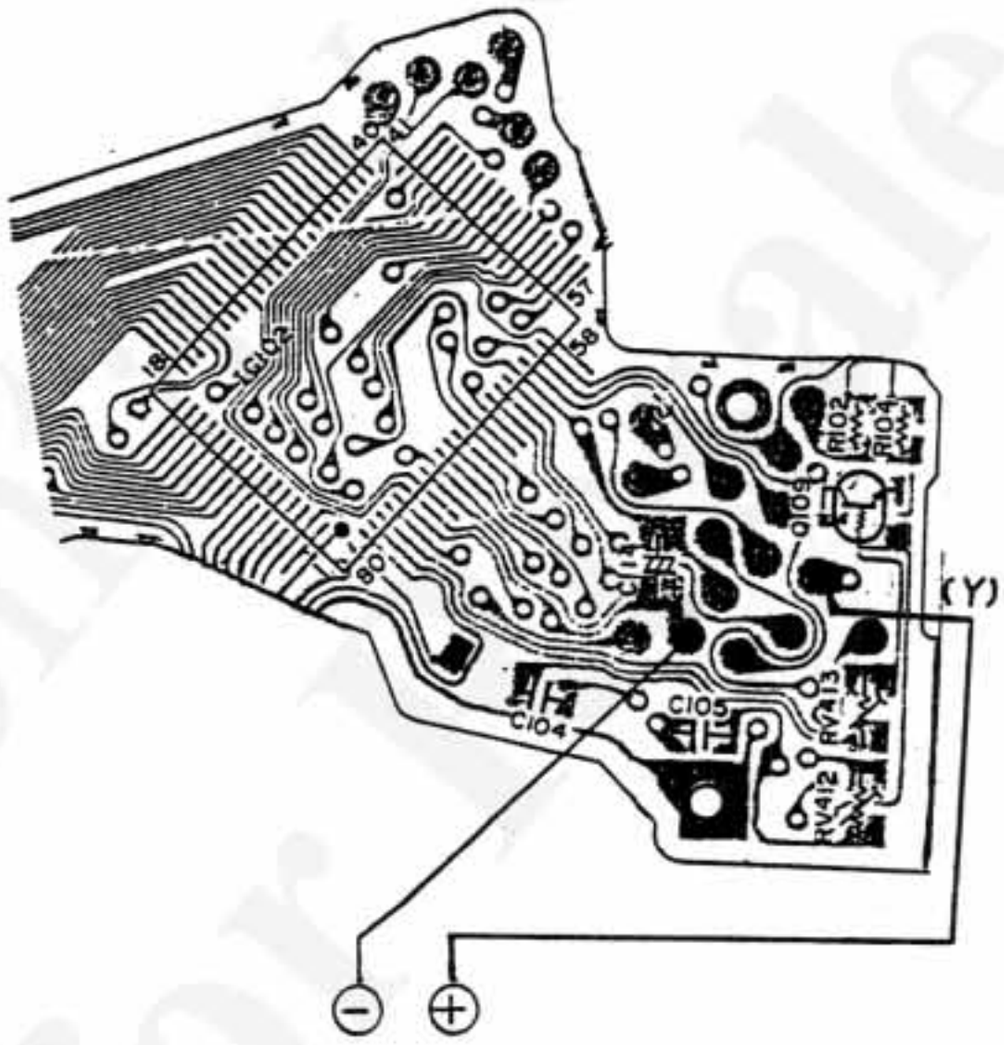
○ Adjusting TV/AV

- Standard values (differ depending on temperatures as shown below)

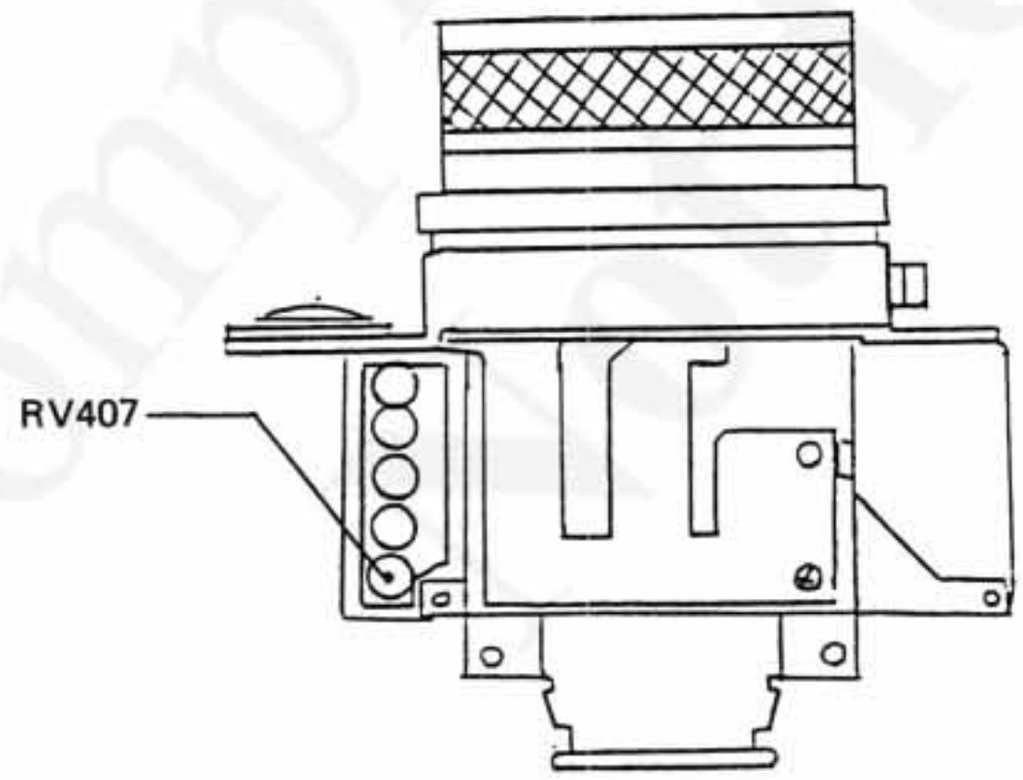
  14° —— 200mV ± 0.5mV
  16° —— 202mV ± 0.5mV
  18° —— 203mV ± 0.5mV
  20° —— 205mV ± 0.5mV
  22° —— 206mV ± 0.5mV
  24° —— 207mV ± 0.5mV
  26° —— 209mV ± 0.5mV
  28° —— 210mV ± 0.5mV
  30° —— 211mV ± 0.5mV

- Measuring method
  1) Measure temperature at the voltage-measuring point.
  2) Measure voltage between the Vref (A lead wire round) and the TV/AV (y lead wire round).
  3) Confirm that the value just measured corresponds to the standard voltage at the temperature of the voltage-measuring point, by referring to the table above.

- Adjusting method
  Should the measured value be off the standard, adjust it by means of the RV407.



Digital voltmeter



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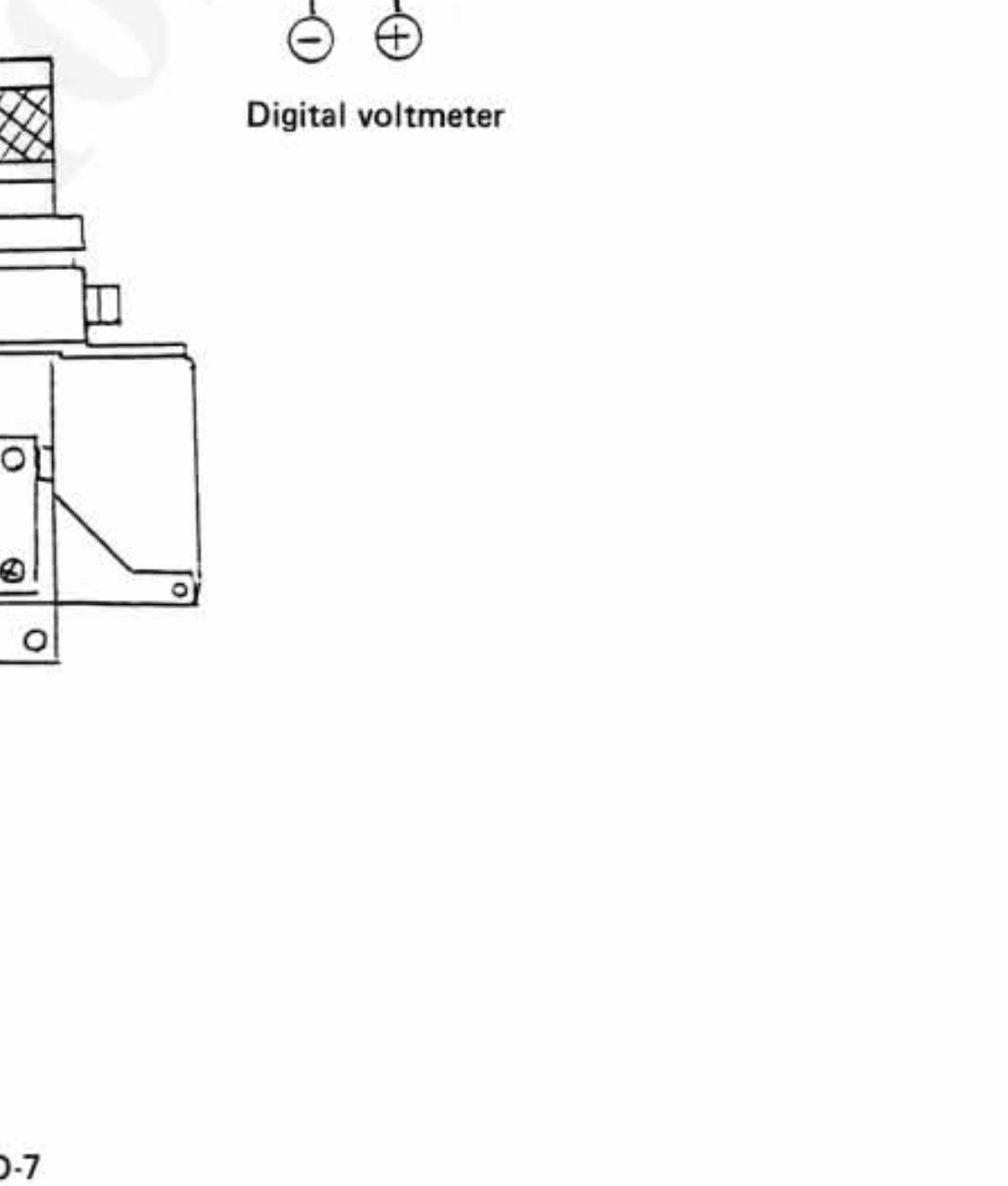
○ Adjusting DAC

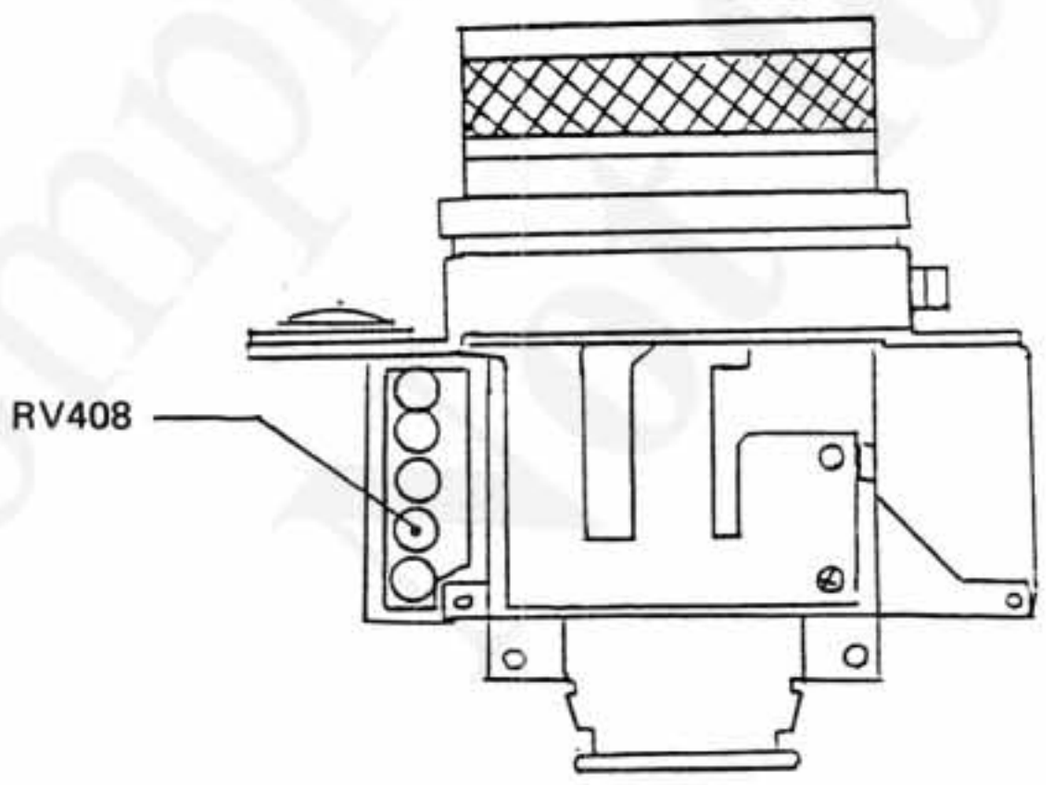
- Standard values (differ depending on temperatures as shown below)

14° —— 193mV ± 0.5mV
16° —— 195mV ± 0.5mV
18° —— 196mV ± 0.5mV
20° —— 197mV ± 0.5mV
22° —— 199mV ± 0.5mV
24° —— 200mV ± 0.5mV
26° —— 202mV ± 0.5mV
28° —— 203mV ± 0.5mV
30° —— 204mV ± 0.5mV

- Measuring method
  1) Measure temperature at the voltage-measuring point.
  2) Measure voltage between the Vref (A lead wire round) and DAC OUT.
  3) Confirm that the value just measured corresponds to the standard voltage at the temperature of the voltage-measuring point, by referring to the table above.

- Adjusting method
  Should the measured value be off the standard, adjust it by means of the RV408.





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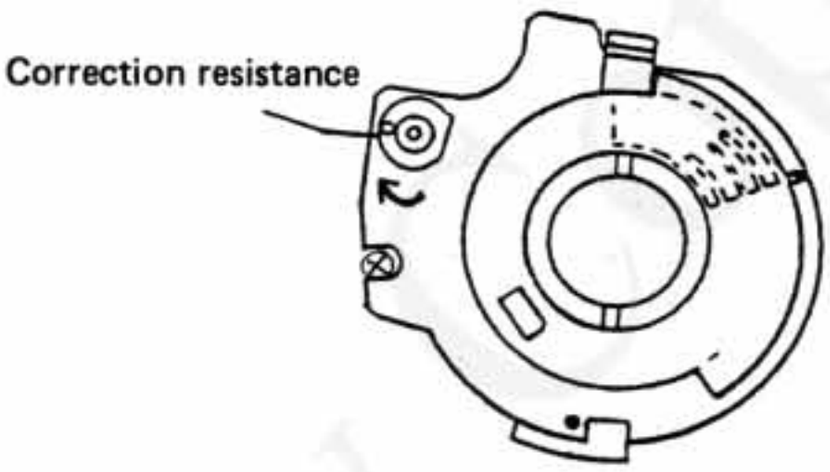
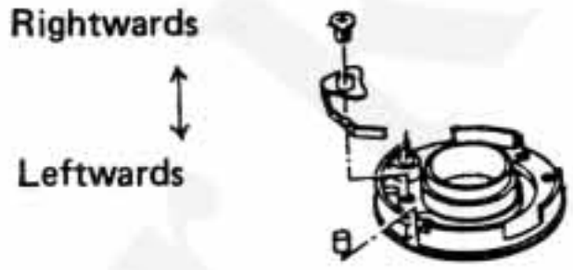
○ Adjusting CV indication

- Standard value
  It should come on at the first click (± 1/3 EV) of the left and right sides (+ and −).

- Adjusting method
  1) Remove a lead wire and the stabilizer used for the measurement.
  2) Mount the front plate ass'y to the main camera body and solder respective lead wires to complete the step just before assembling the top plate.
  3) Place the CV adjusting jig on the assembly.
  4) Watch the viewfinder interior to check indications.
  5) Confirm position and negative indications. Turn clockwise the correction resistance which has been set to 5Ω or less until you find a point where the ± indication once gone off will come on again, and then return the correction resistance by 45° from this point.
  6) After adjusting as above, use the CV click to make the index of the CV dial horizontal.
  7) Confirm that the ± indication is lit on by shifting the CV dial by ± 1/3 EV.



CV click CE596400



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2. Adjusting TV (manual shutter speed)

- Measuring method

  1) Set the power voltage to DC 3.0 ± 0.5V.

  2) Adjust the values at checking points as follows:
     (1) 1/8 sec.: 125ms (intended adjustment)
     (2) 1/2000 sec.: 0.52 ~ 0.55ms
     (intended adjustment)
     (3) Confirm that respective shutter speeds fall within the standard ranges.

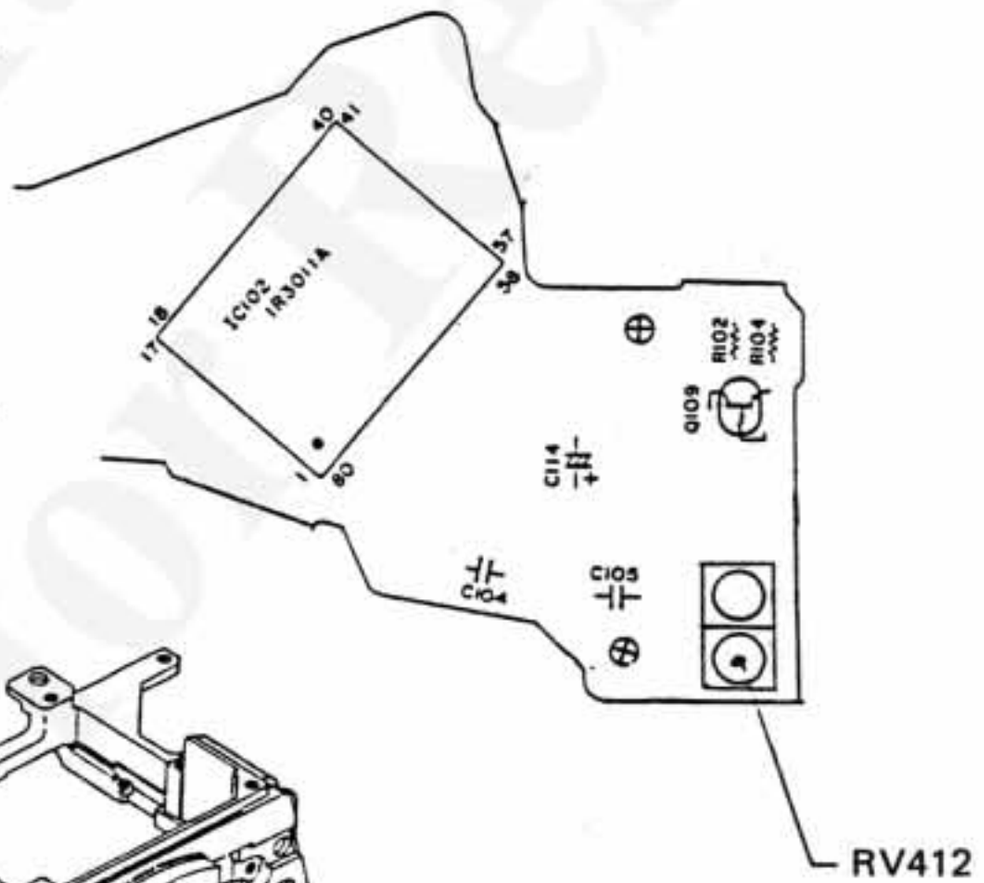
  3) Reassemble the camera.
     (1) Remove the lens.
     (2) Set the mode to MANUAL.
     (3) Check point for low speed: 1/8 sec.
     (4) Check point for high speed: 1/2000 sec.

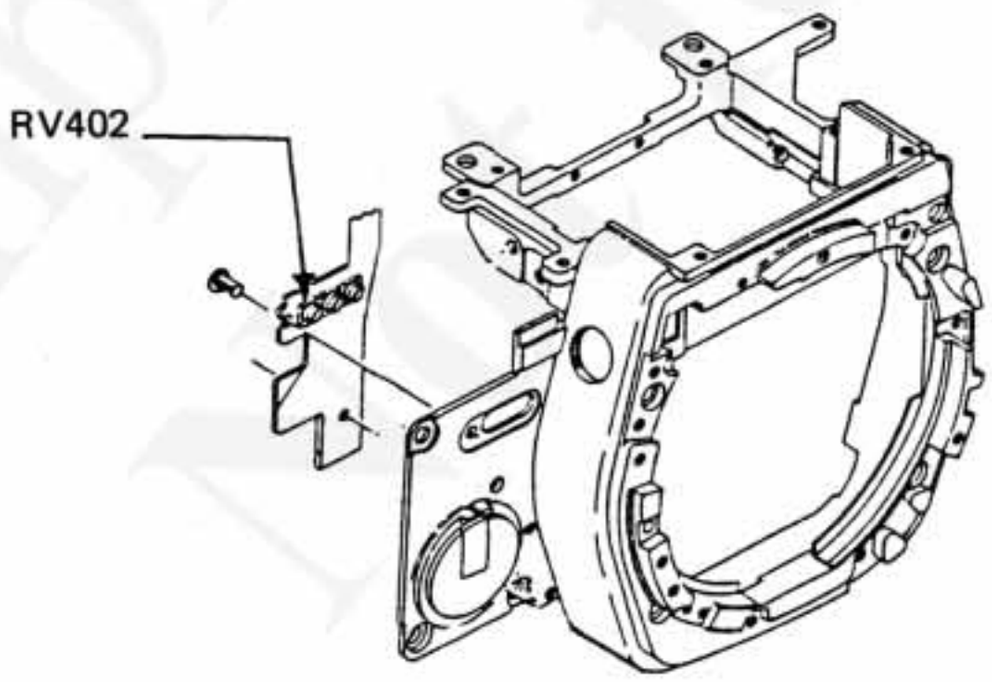
  4) Set the camera onto a shutter tester.
     (1) Advance a few frames releasing shutter.
     Check the 1/8 sec. speed first
     Then, check the 1/2000 speed.
     Finally, check remaining shutter speeds.

- Adjusting method

  1) Adjusting the 1/8 sec. speed
     Use the RV412.

  2) Adjusting the 1/2000 sec. speed
     Use the RV402 after removing the upper right side of the FRONT LEATHER R.





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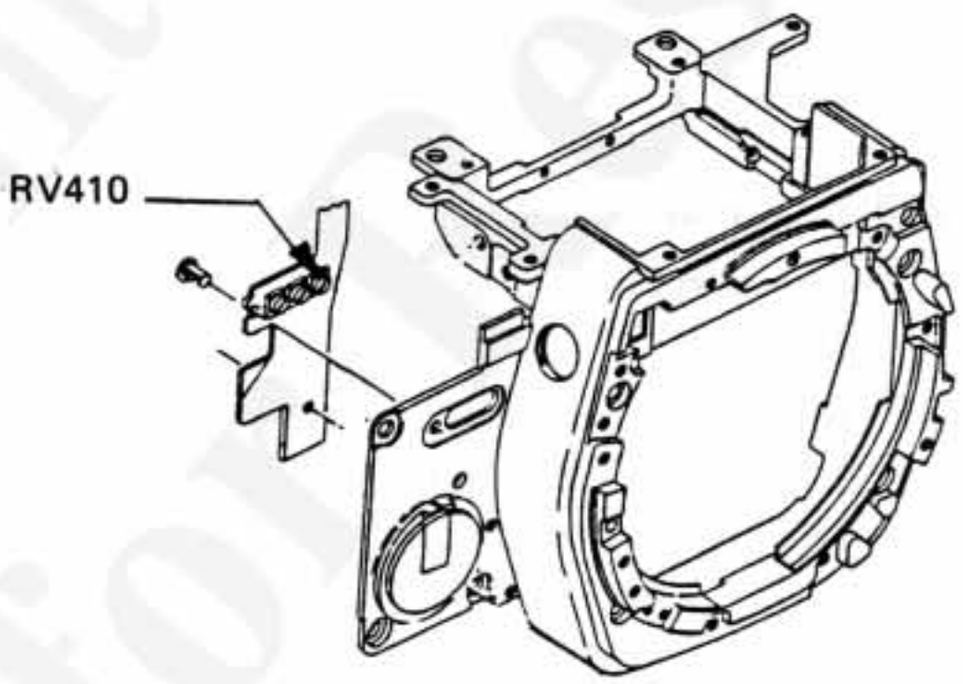
3. Adjusting EE (Direct AUTO)

- Adjusting jigs
  1) jig lens (F5.6, fixed aperture)

- Adjusting values
  1) 0 ± 0.05 EV at BV10, F5.6, and ISO 100
  2) Checking by changing ISO number
     ± 0.4 EV at BV7, F5.6, and ISO 3200 against the ISO 100 standard
  3) ± 0.3 EV at BV10, F5.6, and ISO 200 against the ISO 100 standard

- Measuring method
  1) Power voltage: 3.0 ± 0.05V
  2) Camera
     (1) Mode: Direct AUTO
     (2) ISO: 100 and 3200
     (3) CV: 0
     (4) AV: F5.6 (jig lens)
  3) EE tester
     (1) BV: 10
     (2) K value: 1.3
     (3) ISO: 100 and 3200
  4) Mount the camera onto the EE tester.
     Wind a few frames and release the shutter. Check EE at ISO 100 first. Then, check it at ISO 3200, and finally check it at ISO 200.

- Adjusting method
  1) Adjusting at ISO 100
     Use the RV410 after removing the upper right side of the FRONT LEATHER R.
  2) Adjusting at ISO 3200
     Fine-adjust by means of the RV403.



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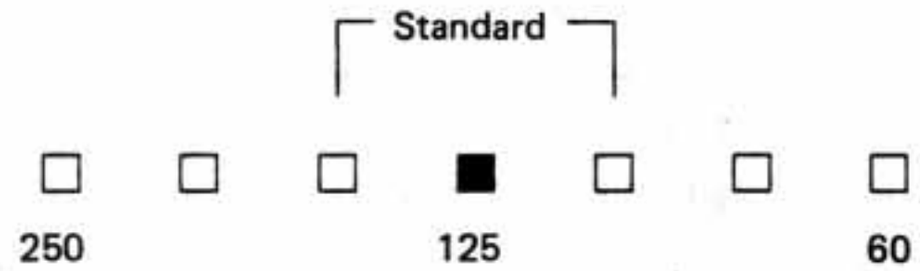
4. Adjusting BV indication

1. Adjusting AUTO (average AUTO)

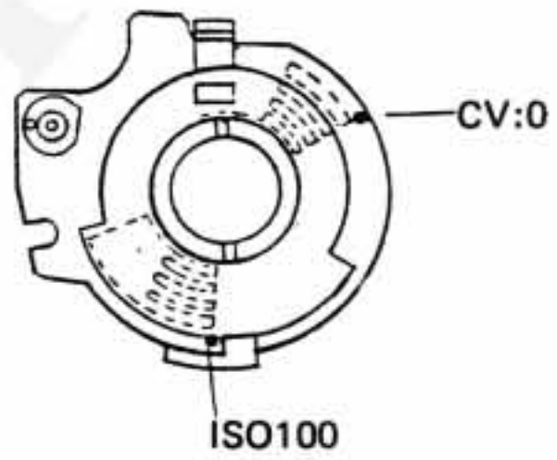
- Measuring jig
  1) Brightness box
  2) Lens (MS5018)
  3) VR-adjusting spanner

- Standard value
  1) Bar indication should be effected at 1/125 at BV11, F4, and ISO 100.

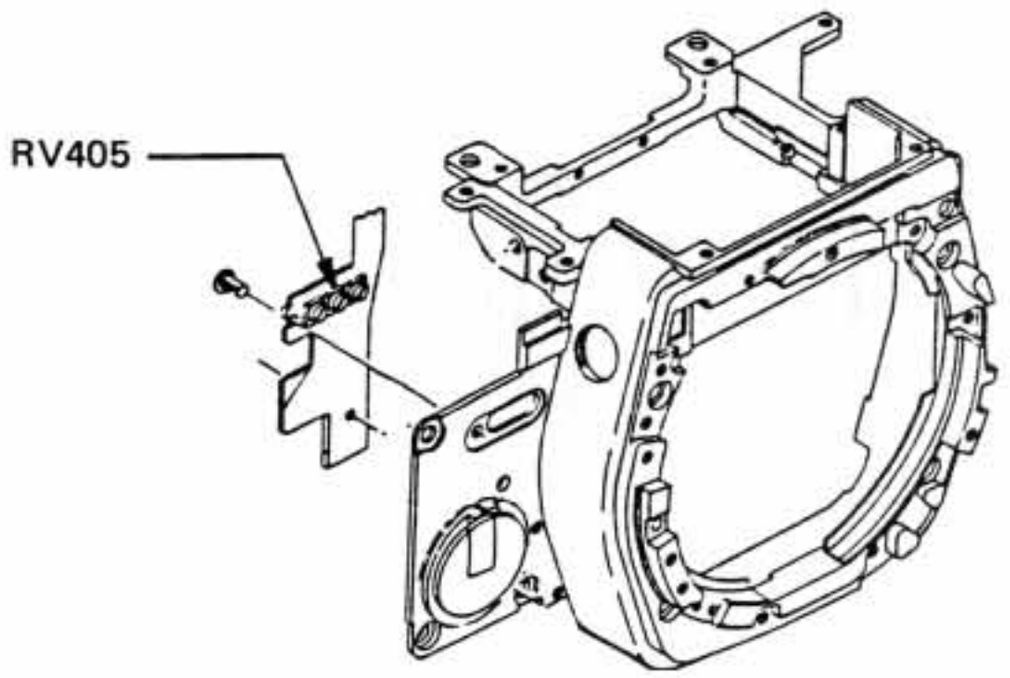


1/125 ± 0.5 EV (± 1 segment)

- Measuring method
  1) Voltage: 3.0 b
- Measuring method
  1) Voltage: 3.0 ± 0.05V
  2) Camera:
     (1) Model: Direct AUTO
     (2) ISO: 100
     (3) CV: Zero
     (4) AV: F4
  3) Brightness box
     (1) BV: 11
     (2) K value: 1.3
  4) Mount the camera on the Light box.
     Set the mode to the Direct AUTO (SW on) and watch the viewfinder interior. The bar indication should fall within the standard range.
  5) Check BV16 (over), 14, 11, and 8 and they all should fall within the standard range.



- Adjusting method
  Use the RV405 after removing the upper right side of the front right optical sensor.



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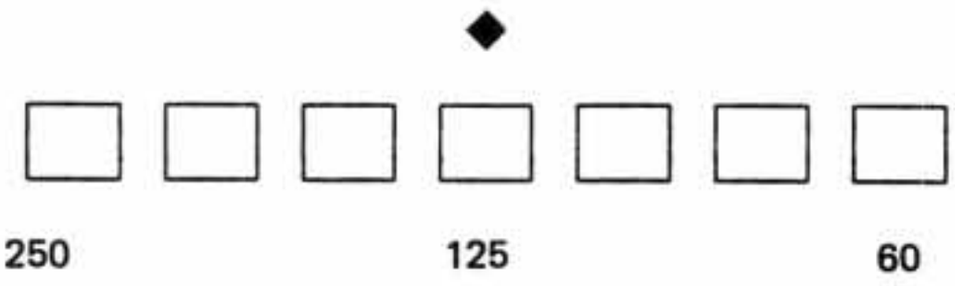
2. Adjusting SPOT

- Measuring jigs
  1) Brightness box
  2) Lens (MS5018)
  3) VR adjusting spanner

- Standard value
  1) Dot indication should be effected at 1/125 at BV11, F4, and ISO 100.



1/125 ± segment

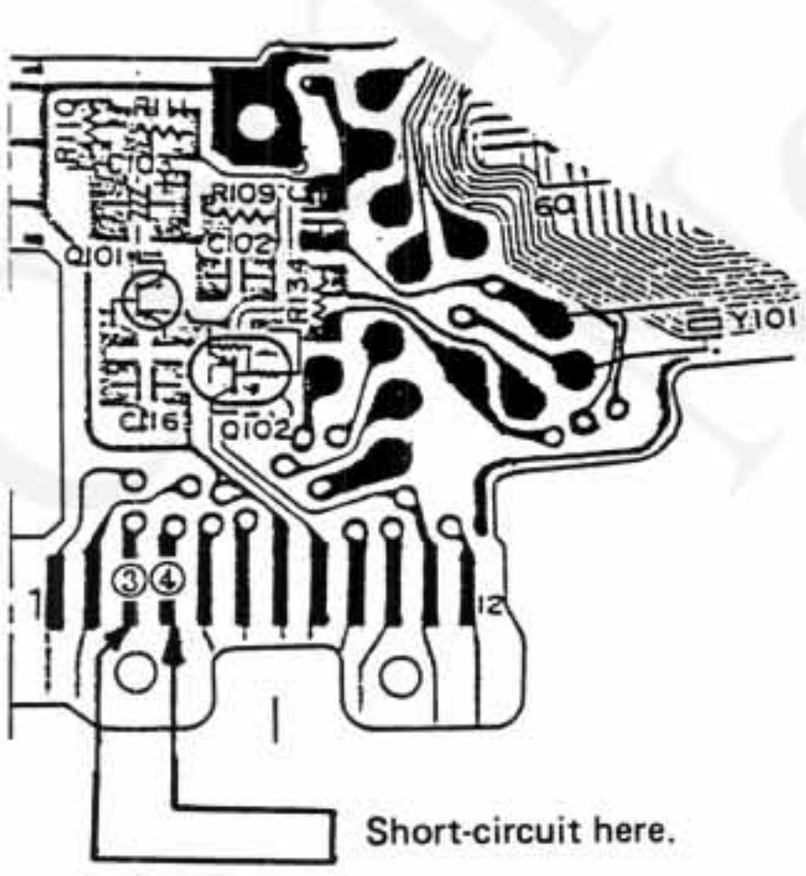
  2) Switching steps: ± 0.5 EV (± 1 segment)

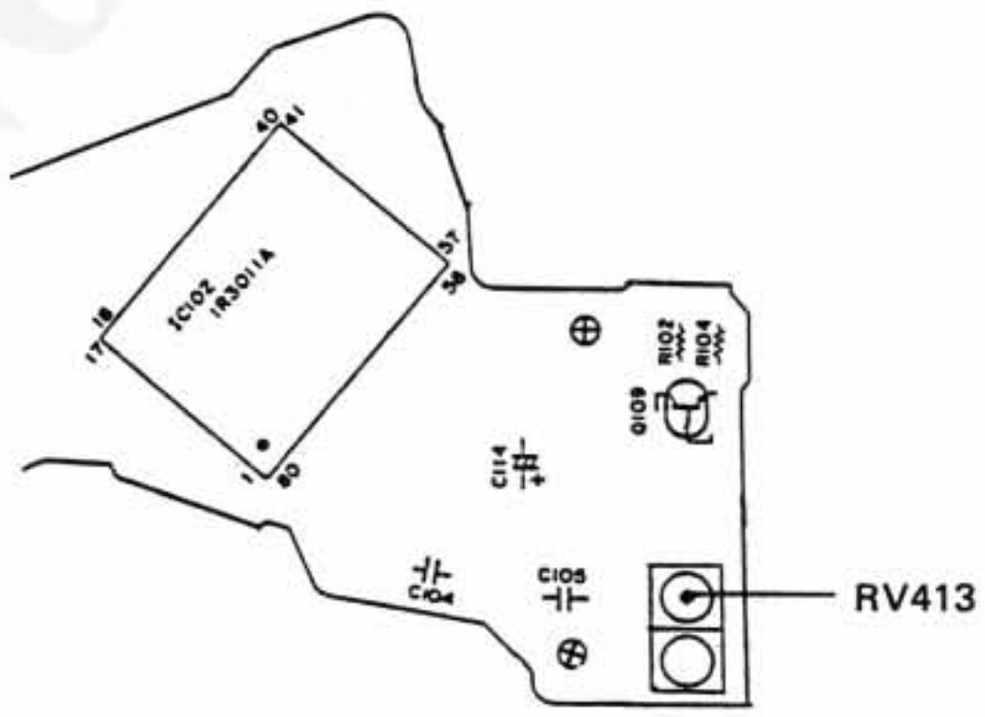
- Measuring method (Spot values should fall within the standard range)
  1) Power voltage: 3.0 ± 0.05V
  2) Camera
  2) (1) Mode: Direct AUTO
  (2) ISO: 100
  (3) CV: Zero
  (4) AV: F4
  3) Brightness box
  (1) BV: 11
  (2) K value: 1.3

  4) Mount the camera ON the Light box.
  (1) Press the SPOT button.
  (2) The dot indication should indicate 1/125 and fall within the standard range.
  (3) Check BV16, 14, 8, and 4 and they all should fall within the standard range.

- Adjusting method
  1) Camera
  (1) Set to the SPOT mode (by using a tweezers to short-circuit the terminals 3 and 4).
  (2) Use the RV413 for adjustment.

SPOT	Short-circuit terminals 3 and 4.
CLEA	Short-circuit terminals 3 and 1.
Hilight	Short-circuit terminals 4 and 5.
SHAD	Short-circuit terminals 4 and 2.
MEMO	Short-circuit terminals 2 and 1.





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I

DESCRIPTION OF MECHANISM

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Experimental
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I. DESCRIPTION OF MECHANISM

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I. GENERAL

The OM-4Ti (T) is the leading single-lens reflex camera which employs sturdy metallic material "titanium" for the exteriors (upper and bottom plates) and is connectable with the new Full Synchro Flash System (Super FP emission) in addition to the functions of the conventional OM-4.

The circuitry of the OM-4Ti (T) is composed of that of the OM-4 (ROM4) to which an external circuit for the Super FP emission is added and for which programs for a bipolar IC (IC102) have modified for further improvement. However, signals are exchanged between IC's in the same manner as the OM-4 (ROM4) does.

Concerning the camera body, the U circuit board on the upper plate and the M circuit board on the camera body are pressure-connected, and the connection between the SE/SV circuit boards and the M circuit board has been made flexible, thereby number of lead wires being reduced.

The mechanical structure remains unchanged from that of the OM-4 except the self-timer (which is common with the OM-2S).

Therefore, this Chapter describes only those circuits which have been added in response to the adoption of the Super FP flash mode.

II. SYNCHRO MECHANISM FOR SUPER FP FLASH

Conventional X contact could not synchronize a flash emission to all the shutter speeds. As a result of our successful development of the Super FP flash system, the OM-4Ti (T) incorporates a synchro contact (FX) exclusive for the Super FP flash in lieu of the X contact to operate the Super FP flash in a manner to maintain the emission at a certain luminance during the time the shutter blind travels (the flash emits light for such a prolonged duration) and to expose the whole film screen, thereby the flash being synchronized with all the shutter speeds up to 1/2000 sec.

This means that the fact that the flash emits light while the shutter blind travels is to artificially produce a light source homogeneous with daylight and so the Full Synchro Flash System allows photographers to take photographs as if under natural daylight.

	OM-4Ti (T)			Current OM cameras		
	Ordinary flash emission	TTL controlled light	Super FP emission	Ordinary flash emission	TTL controlled light	Super FP emission
Super FP emission	X	O	O	X	O	X
T-series flash	O	O	X	O	O	X

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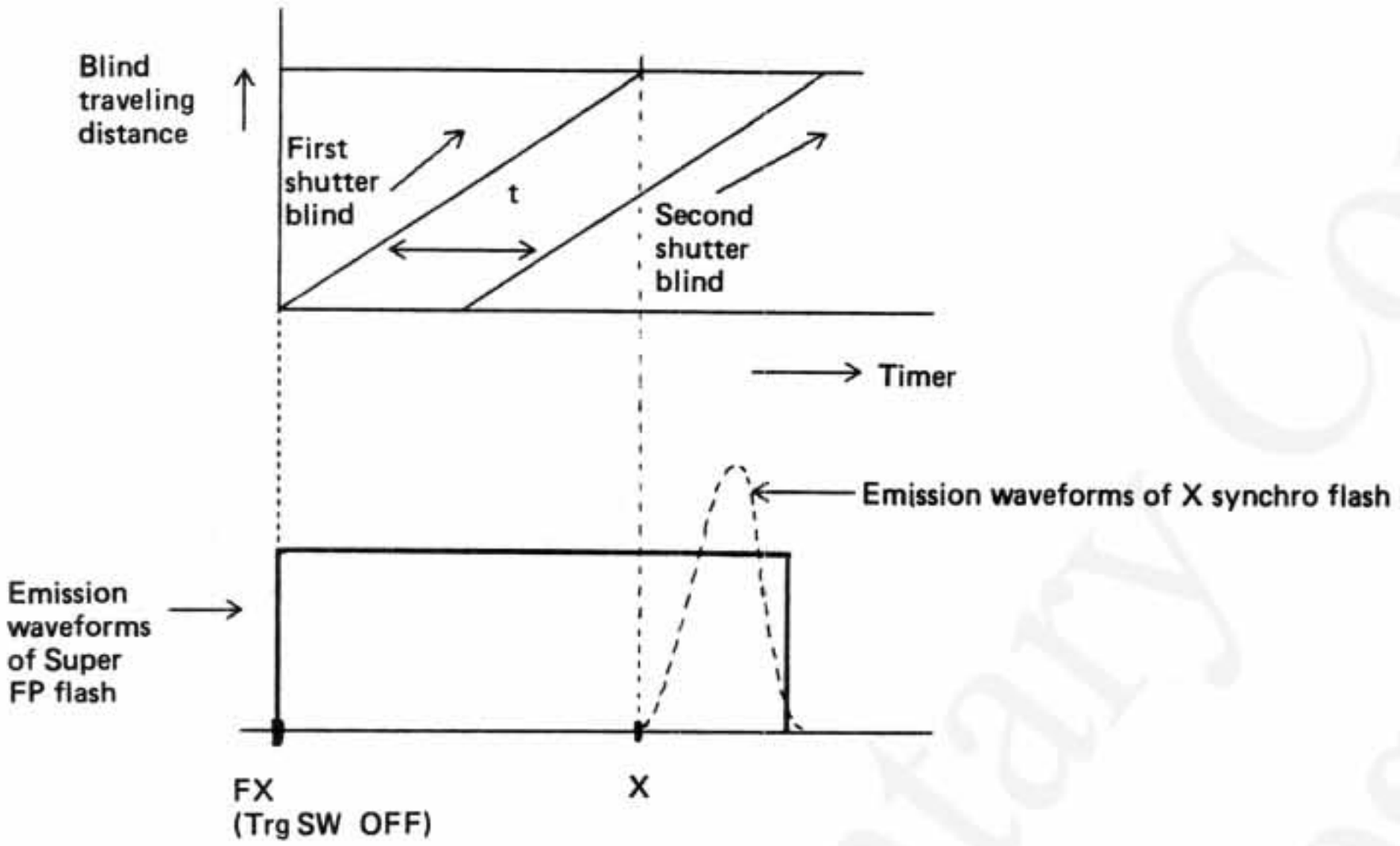
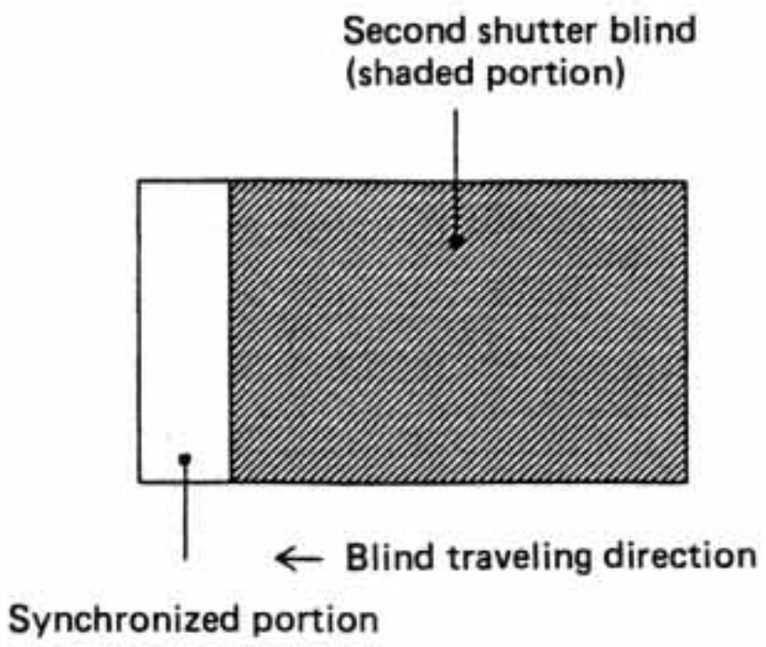
1. Synchronizing timing



Synchro time lag (FX) for the Super FP flash

Since the time of the FX is synchronized with switching off of the trigger switch, the Super FP flash emits light when the first shutter blind starts traveling.
The Super FP flash has so long emission time (approx. 19 ms ~ 40 ms) that it maintains emission even after the second shutter blind completes traveling, thereby synchronized with high shutter speeds (such as 1/60 to 1/2000 sec.).

- X synchro
  Since the emission timing of conventional X synchro mechanism is set after the first shutter blind has completed traveling, the screen under a high shutter speed is synchronized only partially because the second shutter blind has already started traveling at that timing.



Shaded screen in X synchro at high shutter speeds

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2. Determining exposure

Since the flash emission of the Super FP Flash can be handled in the same manner as natural daylight, TTL direct light measurement can be effected to automatically determine exposure through changing the shutter speed in the AUTO mode.
In this case, the shutter speed is determined based on the sum total of the natural daylight and the flash emission.

Ⅲ. DESCRIPTION OF ELECTRIC CIRCUITS

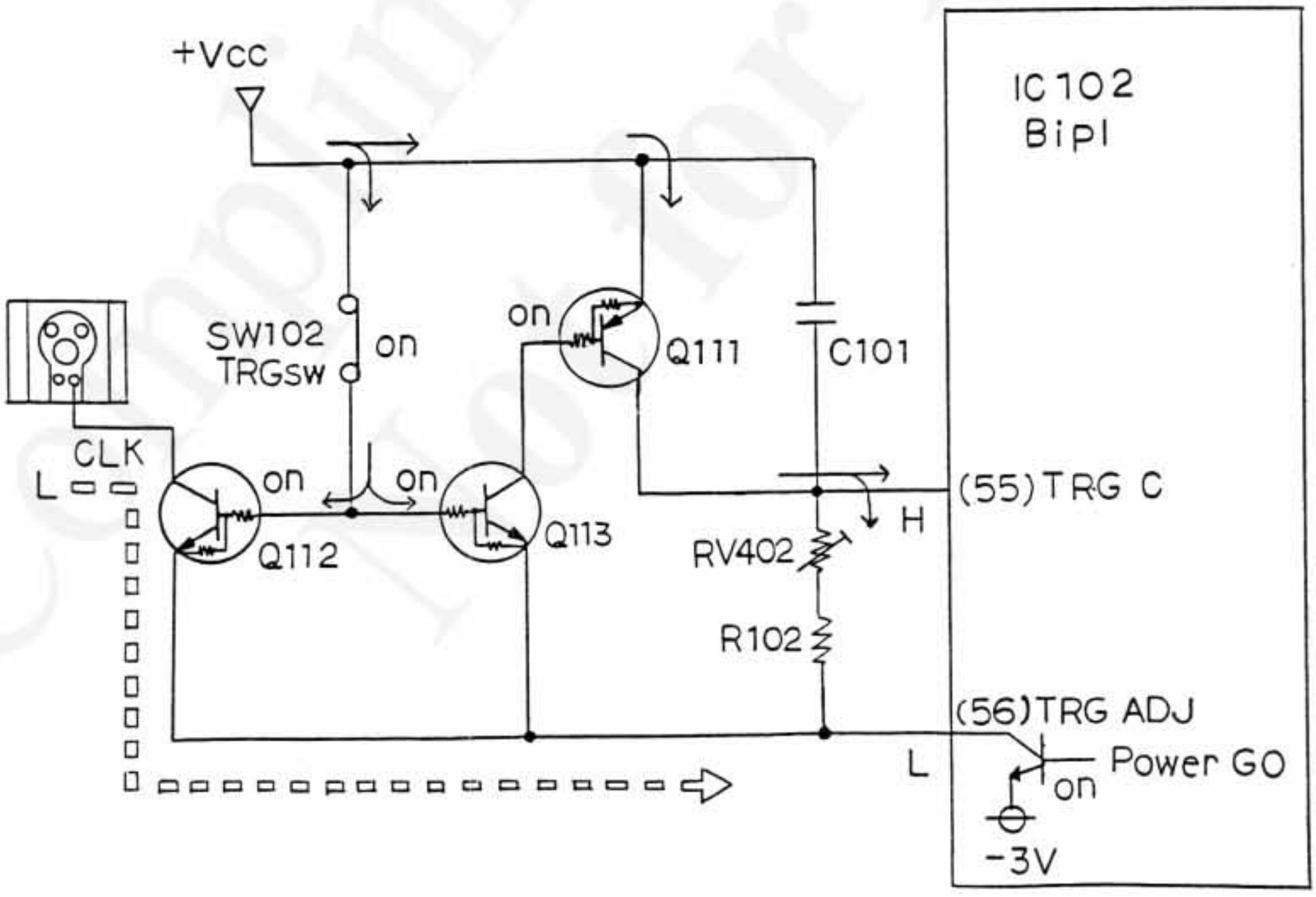
1. Flashing circuit

By adding three transistors to the trigger circuit of the OM-4, flashing signals for the Super FP flash are produced.

1) State immediately before the first shutter blind starts traveling after pressing the release button:

Switches	Transistors	Terminals
Trg SW ON M SW ON	Q111 ON Q112 ON Q113 ON ..... C101 is discharging.	Bipl (55) H Bipl (56) L CLK terminal (shoe) L

By turning on the M SW, the CLK terminal is changed to L, thereby the Super FP flash being standby.



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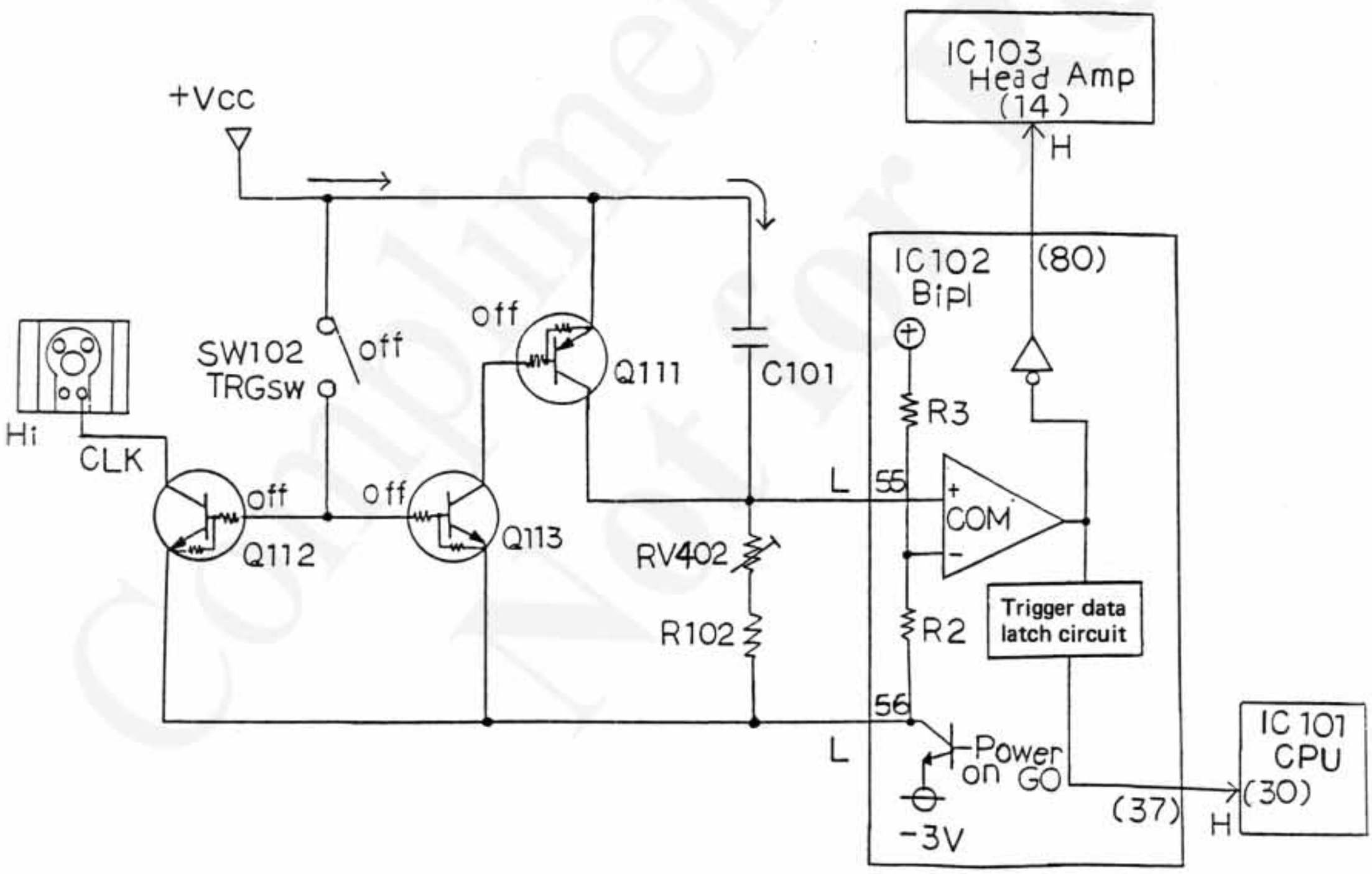
2) State after the first blind has started (Super FP flash starts emission)

Switches	Transistors	Terminals
Trg SW OFF M SW ON	Q111 OFF Q112 OFF Q113 OFF ..... C101 is discharging.	Bipl (55) L Bipl (56) L CLK terminal HI impedance (Super FP flash emits)

When the CLK terminal is rendered to high impedance as a result of switching off the Trg SW, the Super FP flash emits light.
Since the M SW is kept turned on in this case like the conventional OM-4, the C101 starts charging. When the standard voltage for reversing the comparator is reached, the Bipl (80) outputs H signals to the head amplifier (14), thereby the amplifier starting integration. At the same time, the trigger data latch circuit outputs H signals to the CPU (30) through the Bipl (37).



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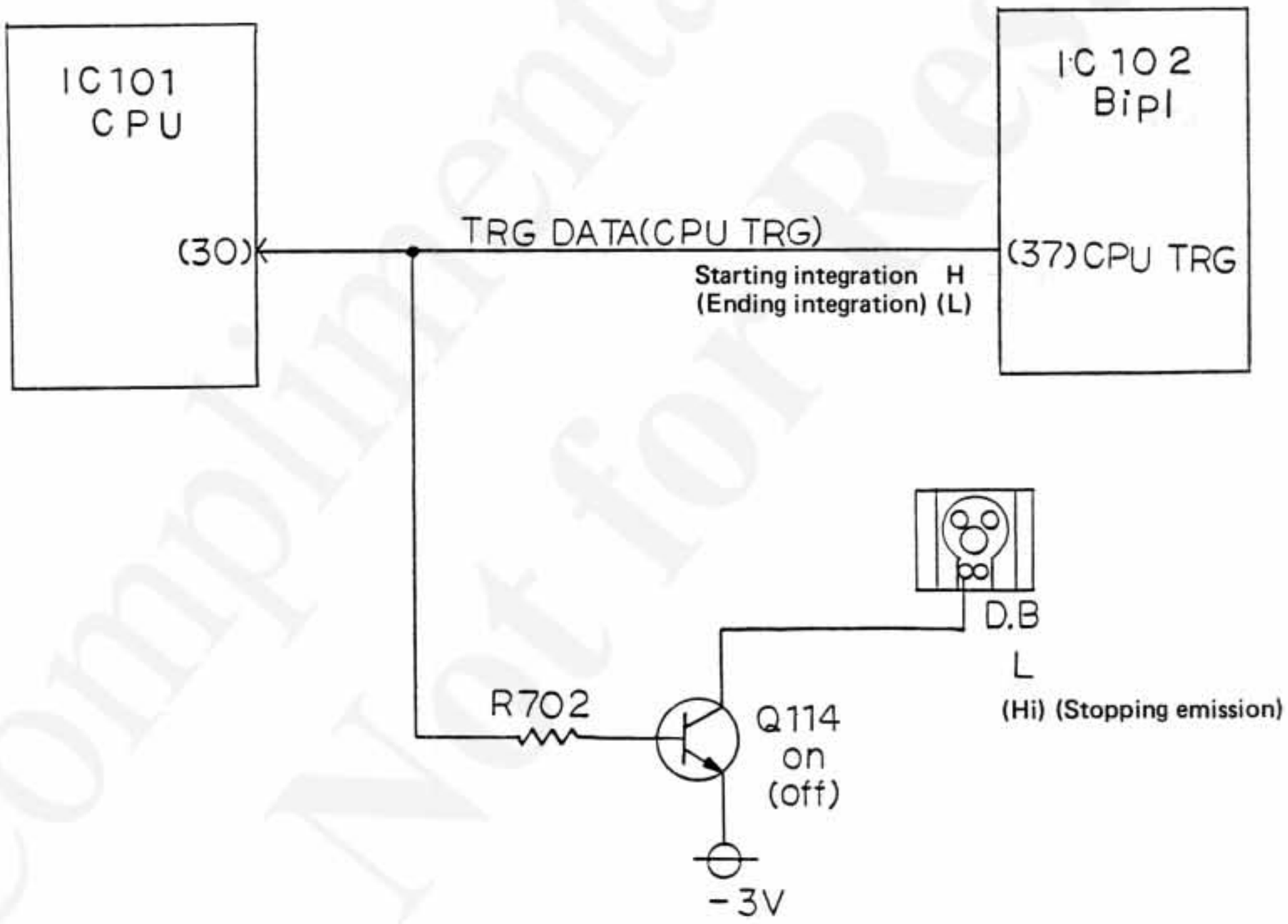
3) Stopping the emission

The Super FP flash stops emission when it reads out a signal (HI) of completion of integration from the D.B. terminal of the camera while it is emitting.

Switches	Transistors	Terminals
Trg SW OFF M SW ON	1. Q114 ON	1. Bipl (37) H (Starting integration) D.B. terminal L
	2. Q114 OFF	2. Bipl (37) L (Ending integration) D.B. terminal in high impedance (Super FP flash stops emission)



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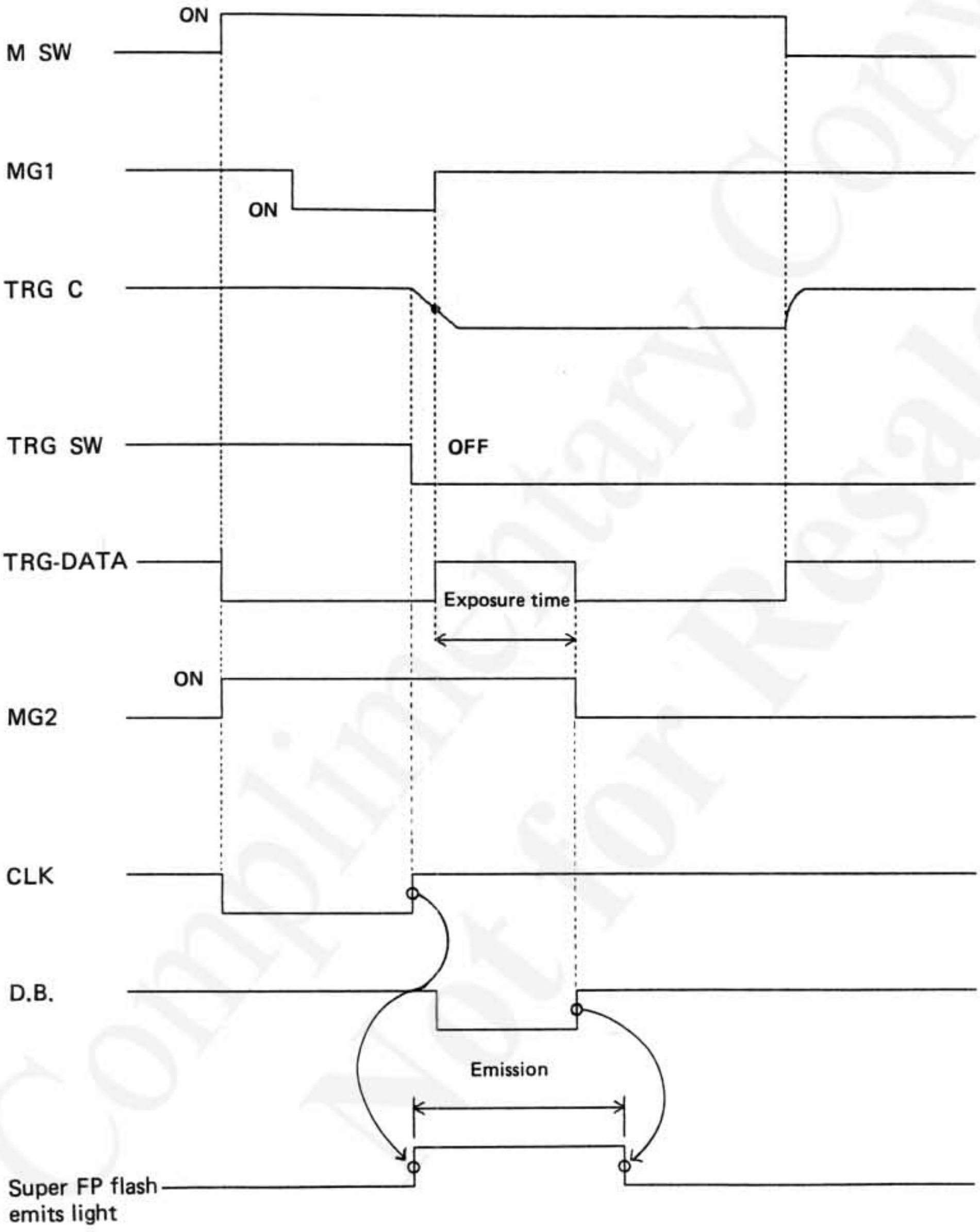
2. Time chart



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3. Description of electrical parts

3-1 Diodes

1) D101:
Separates databack from camera.

2) D102:
Diode for a circuit which flows larger current to the B.C. than self-timer current.

3) D201: Protective diode
Protects batteries from being inserted upsides down (located in TV connector 6 interior)

4) D301:
Diode for protecting from flashing noises

5) D701:
Protective diode, protecting L terminal.

3-2 Resistances

1) R102: Trg-adjusting resistance
Adjusts delay time of the trigger in combination with the RV302.

2) R103: Iref-adjusting resistance
In combination with the RV104, the R103 matches reference current in the data reference current generating circuit in the bipolar IC interior.

3) R104: BV-adjusting resistance
In combination with the RV305, it regulates BV level.

4) R106: TV/AV-adjusting resistance
In combination with the RV307, it matches with the reading level of the DAC in the TV/AV.

5) R107: LOCK-adjusting resistance
In combination with the RV309, it regulates locking voltage.
2.65V → locking, 2.90V → releasing

6) R108: LOCK-adjusting resistance
In combination with the RV309, it regulates locking voltage.

7) R109: Thyristor gate pull-down resistance
In combination with the C102, it protects thyristor from malfunctioning by eliminating unnecessary surge noises.

8) R110: Gate trigger resistance
In combination with the C103, it turns on thyristor.

9) R111:
Lowers impedance of the negative terminal of the C103 when the Q101 is turned off and secures sufficient potentials when it is turned on.

10) R112: Current-limiting resistance
Limits base current of the Q108.

11) R113: Current-limiting resistance
Limits base current of the Q103.

12) R114: Clock resistance
Composes a system clock for the CPU.

13) R118: Current-limiting resistance
Limits collector current for the Q104.

14) R119: Current-limiting resistance
Limits emitter current for the Q105.

15) R120: Current-limiting resistance
Limits collector current for the Q106.

16) R121: Positive return resistance
Maintains the same potentials with the anode of the head amplifier to prevent leak current by producing a positive return loop.

17) R122: Positive return resistance
Maintains the same potentials with the anode of the head amplifier to prevent leak current by producing a positive return loop.

18) R124: Filter resistance
Composes a low-frequency filter in combination with the C108.

19) R125: Bias resistance for temperature-correcting diode
Alleviates drift for offsetting temperature changes.

20) R126:
Pulls down noises in advance to lower impedance so that the Q103 may not malfunction due to such noises.

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21) R128: Current-limiting resistance
Limits collector current of the Q108.

22) R129: Current-limiting resistance
Limits self current to the B.C. circuit.

23) R130: Current-limiting resistance
Limits base current of the Q107.

24) R131: Pull-down resistance for the BAT LED terminal
Stabilizes reception of signals from the CPU.

25) R132: Pull-down resistance for TRG DATA
If the MG1 CHARGE is changed into L while TRG DATA are unstable, this resistance forcibly change TRG DATA into L.

26) R133: Resistance for preventing oscillation of the main comparator.

27) R134: Pull-up resistance for the CPU TRG terminal

28) R201: Noise-preventing resistance
Prevents noises from input to M SW.

29) R301, R302, R303, and R304:
Spliting resistances
Generates bias voltage by splitting reference voltage for driving LCD by means of the resistances of R301 to R304.

30) R305: Pull-down resistance for test terminal
Lowers impedance of the test terminal so that no test mode may be entered while not required.

31) R306:
Linearizes rising waveforms of the ϕLCD.

32) R307:
Linearizes lowering waveforms of the ϕLCD.

33) R701: L terminal protective resistance

34) R702: Current-limiting resistance
Limits base current of the Q114.

35) R703 and R704:
Zero-ohm resistance which acts as a jumper line (in the U6 circuit board)

3-3 Transistors

1) Q101: Thyristor-driving transistor
Drives the thyristor gate to establish continuity of the thyristor for causing the flash to emit light.

2) Q102: TTL-controlling transistor
Controls TTL of exclusive flashes such as T20 and T32.

3) Q103: CPU-interrupting transistor
Lowers the INTA terminal of the CPU to L (for interrupting purpose).

4) Q104: MEMO LED-driving transistor
Acts as on/off switch of the MEMO LED.

5) Q105: Lamp-driving transistor
Acts as on/off switch of the LAMP.

6) Q106: Flash LED-driving transistor
Acts as on/off switch of the Flash LED.

7) Q107: Lamp-driving transistor
Acts as on/off switch of the lamp.

8) Q108: BC/SELF LED-driving transistor
Acts as on/off switch of the B.C./SELF LED.

9) Q109: Transistor for absorbing noises of the CLR of the SW 113M.

10) Q111: Transistor for Super FP flash signals
Discharge the C101 by turning on the TRG SW.

11) Q112: Transistor for Super FP flash signals
Controls the Super FP flash emission.

12) Q113: Transistor for Super FP flash signals
Acts as on/off switch of the Q111.

13) Q114: Transistor for producing signals to stop Super FP flash emission
Turns on and off the flash in accordance with the Trg data signals.

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3-4 Capacitors

1) C101: Trg-adjusting capacitor
Adjust advance and delay of mechanical time from turning off the Trg SW to actual exposure.

2) C102: Surge-absorbing capacitor
Absorbs surge noises other than ON signals.

3) C103: Gate trigger capacitor
Turns on the thyristor gate to give continuity between anode and cathode of thyristor.

4) C104: Regenerating capacitor
Determines shutter time (1 ~ 1/2000) for regenerating manual mode.

5) C105: AUTO RESET capacitor
Resets the CPU when the circuit is released from locking status.

6) C107: Phase-regulating capacitor
Fine-adjusts oscillating frequencies and regulates phases.

7) C108: Filter capacitor
Alleviates noises which are to be mixed in integrated output.

8) C109: Integration capacitor
Acts as integration capacitor at low ISO values when combined with C110 and C111.

9) C110: Integration capacitor
Acts as integration capacitor at medium ISO values when combined with C111.

10) C111: Integration capacitor
Acts as integration capacitor at high ISO values when used alone.

11) C112: Phase-correcting capacitor
Adjusts frequency at the time when the gain of the amplifier is zero dB.

12) C113: Bypass capacitor
Alleviates noises to be mixed in the reference voltage lines.

13) C114: Bypass capacitor
Stabilizes reference voltage (output of 1.8V).

14) C116: Capacitor for preventing erroneous emission of flash
Protects the flash from erroneously emitting as a result of bounding when turning on the M SW.

15) C120: Delay capacitor
Delay entrance of MS signals in CPU more than Bipolar.

16) C201: MG1 capacitor
Stores energy to cause the MG1 to be repellent.

17) C202: Surge-absorbing capacitor
Absorbs surge voltage to be produced when turning off the MG2.

18) C202:
Protects the flash from erronenously emitting light when turning off the MG2.

19) C301: Stepup capacitor
Generates voltage (6V) for driving the LCD.

20) C302: Stepup capacitor
Generates voltage (6V) for driving the LCD.

21) C401: Bypass capacitor
Alleviates noises to be mixed in HA (mode-selecting signals).

22) C402: Bypass capacitor
Alleviates noises to be mixed in HB (source bias signals).

23) C404: Bypass capacitor
Alleviates noises to be mixed in power line around the CPU.

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3-5 Variable resistors

1) RV402: Trg-adjusting variable resistor
Regulates Trg in combination with the R102.

2) RV403: Offset-adjusting variable resistor
Adjusts offset of the main comparator.

3) RV404: Iref-adjusting variable resistor
Adjusts reference voltage in combination with the R103.

4) RV405: BV Ave-adjusting variable resistor
Adjusts BV level in combination with the R104.

5) RV407: TV/AV-adjusting variable resistor
Assures matching with DAC-reading level of the TV and AV in combination with the R106.

6) RV408: DAC-adjusting variable resistor
Adjusts the DAC at 18mV per setp (at 25°C).

7) RV409: Lock-adjusting variable resistor
Adjusts locking voltage in combination with the R107.

8) RV410: EE-adjusting variable resistor
Adjusts EE.

9) RV411: Head amplifier offset adjusting variable resistor
Adjusts offset of the head amplifier.

10) RV412: Regeneration-adjusting variable resistor
Adjusts regenerating shutter speeds.

11) RV413: BV spot-adjusting variable resistor
Adjust BV spot level.

3-6 Thyristor

1) Q110: Thyristor for flash emission

3-7 LED's

1) P101: BC self LED
Acts as marking for B.C. and self-timer.

2) P102: MEMO LED
Acts as marking for MEMO and MEMO HOLD.

3) P103: LAMP
Comes on for 10 seconds for illuminating LCD's.

4) P104: Flash LED
Acts as marking for displaying charging and light controlling of a T-series flash.

3-8 Controlling magnets

1) RY101: MG1
Removes S claw as a result of repelling force of combination magnets. When the MG1 is turned on, S lock is released.

2) RY102: MG2
Controls the second shutter blind and determines exposure.

3-9 Quartz oscillator

1) Y101:
Acts as reference clock for ϕLCD in the LCDD, for oscillating PCV and for regeneration shutter speeds.

3-10 LCD

1) LD101: Liquid crystal display panel
Displays data processed in the CPU interior.

3-11 Pronouncing element

1) Y102 (PCV)
Pronounces as required.

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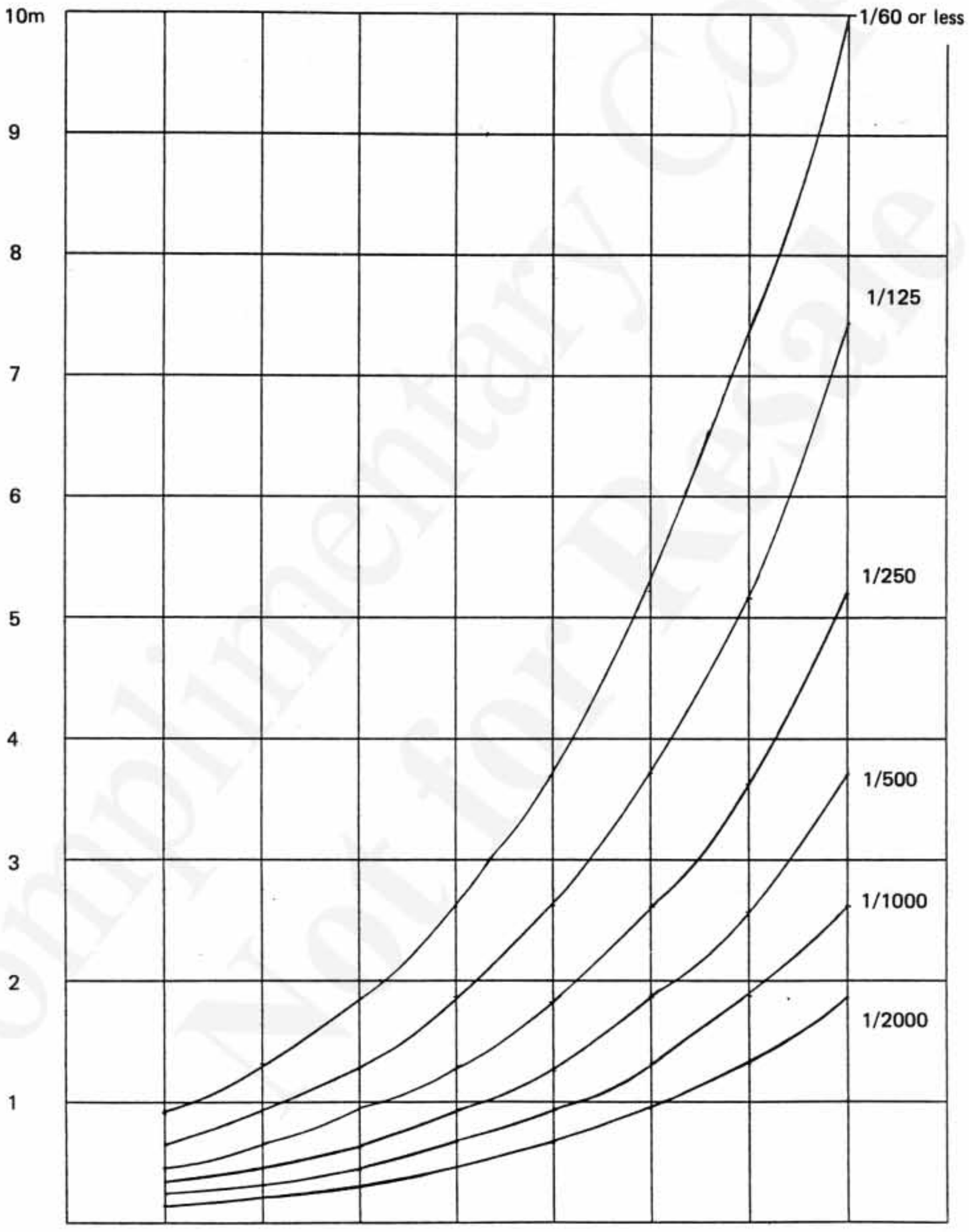
J. OTHERS

Reference:

* Table of far distance limits of F280 Super FP Flash



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Questions	Answers
1. Are accessories for the OM-4 compatible with those made of titanium for the OM-4Ti?	Not compatible. Since they are different (in the specifications), accessories for other models cannot be mounted. Moreover, such replacement is also impossible because the internal structures differ respectively.
2. When the mode selector lever is set between the AUTO mode and the B.C. mode, an electronic sound is heard. Is this not any trouble?	It is not trouble. A reset mode is located between the AUTO mode and the B.C. mode. If the reset mode is selected, an electronic sound different from that for the B.C. mode is heard. (But, no LED comes on.)
3. When the F280 causes the Super FP flash to emit light in the AUTO mode of the OM-4Ti, the synchro shutter speeds are set to 1/60 to 1/2000 sec. How about those under 1/60 second?	Shutter speeds lower than 1/60 are selectable in the AUTO mode. When the CPU of the OM-4Ti judges the brightness corresponds to 1/60 second or lower, the flash controlling circuit functions to produce a high-speed limiter signal to set the speed to 1/60. (This is same as the case with 1/60 second or lower when using a T-series flash.)
4. How much is the guide number when taking photographs by using the F280 in the Super FP flash system at high shutter speed?	Unlike flashing emission, light volume sensed by a film is reduced in proportion to the slit width.

Shutter speed	Guide number
1/2000	2.6
1/1000	3.7
1/500	5.2
1/250	7.3
1/125	10.4
1/60 or less	14.7

5. Is it possible to use a T-series flash in the OM-4Ti at shutter speeds of 1/60 or more?	It is impossible. The T-series flash incorporates no Super FP flashing functions. So, use it at the flashing emission at 1/60 second or less.

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